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U.S. Department of the Interior
Bureau of Land Management

Coos Bay District Office
1300 Airport Lane
North Bend, Oregon 97459-2000

January 1991

Summary of the Analysis of the Management Situation

Coos Bay District
Resource Management Plan

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As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

BLM-OR-PT-91-4-1792

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
COOS BAY DISTRICT OFFICE
1300 AIRPORT LANE
NORTH BEND, OREGON 97459-2000

TAKE PRIDE IN AMERICA

January, 1991

Dear Concerned Citizen:

This booklet contains a summary of our analysis of the management situation (AMS) portion of the resource management plan (RMP) we are preparing. The AMS pulls together important information about existing resource conditions, uses and demands; management activities; natural relationships, and management opportunities. It provides the baseline for subsequent steps in the planning process, such as design of alternatives and analysis of environmental consequences. The AMS also provides most of the data that will be summarized in the "affected environment" chapter of the environmental impact statement (EIS). The maps included are necessarily not detailed (due to limitations of scale). More-detailed maps and the entire AMS are available for review in the district office during normal working hours.

Your comments on the information in the AMS will help us verify its accuracy. If you think we have overlooked or incorrectly described any important information about BLM resources relevant to development of the plan, please let us know.

In addition to comments on the AMS, we are also interested in your suggestions for criteria we should consider in formulating the preferred alternative. At the back of this booklet, in Appendix 3, the State Director guidance shows the goals, objectives and criteria for five "common" alternatives we and the other western Oregon districts propose to analyze in each of our RMP/EISs. We also will analyze a no-action (no-change) alternative and a yet-to-be-selected preferred alternative which may combine elements from several of these alternatives. If one of the alternatives outlined fits your objective for a preferred alternative, please let us know. You may wish instead to suggest a new preferred alternative blending elements of the common alternatives, continuation of specific parts of current management direction, or implementation of specific management opportunities identified in the AMS. Feel free to specify other management opportunities you believe are relevant but are not identified in the AMS. After reviewing the sensitivity analysis of timber management prescriptions displayed, and seeing the list of other such analyses that we intend to complete later in the process, you may also want to suggest a preferred set of timber management prescriptions.

BLM must choose a preferred alternative which complies with legal requirements applicable to management of the lands it administers. Therefore, in presenting your suggestions for preferred alternative criteria, it would help if you would relate how your suggested criteria would achieve legally required BLM objectives. For most BLM-administered lands in western Oregon, these are contained primarily in the O&C Act and the Federal Land Policy and Management Act (FLPMA).

A worksheet for your use in commenting on the AMS and providing suggestions about the preferred alternative is inserted in the middle of this booklet. It is intended to help put your comments in the most effective form.

Please send us your comments (whether you use the insert or not) by February 22, 1991, so we can consider them as we move ahead with our planning effort. After reviewing comments, we will revise the AMS as appropriate, finish formulating alternatives, analyze their effects and then select a preferred alternative. The Draft RMP/EIS reflecting these revisions and steps should be issued for public comment late in 1991.

For those who wish to discuss the information in the AMS or the proposed plan alternatives, we have scheduled two informal open-house-style public meetings. These will be held on Monday, February 11, 1991, one from 1:00 to 4:00 p.m., and one from 7:30 to 9:30 p.m. They will be held at the Coos Bay District Office, at 1300 Airport Lane, North Bend, Ore. BLM staff will be available to answer questions and assist you in preparing written comments if you so wish.

Thanks for your help with this planning effort. We look forward to your continuing interest and participation. For further information or clarification, please call this office at (503) 756-0100. We're open from 7:45 a.m. to 4:30 p.m. weekdays.

Sincerely,

Mel Chase

Mel Chase
District Manager

U.S. Department of the Interior
Bureau of Land Management
Coos Bay District
January 1991

Summary of the Analysis of the Management Situation

for the

Coos Bay District

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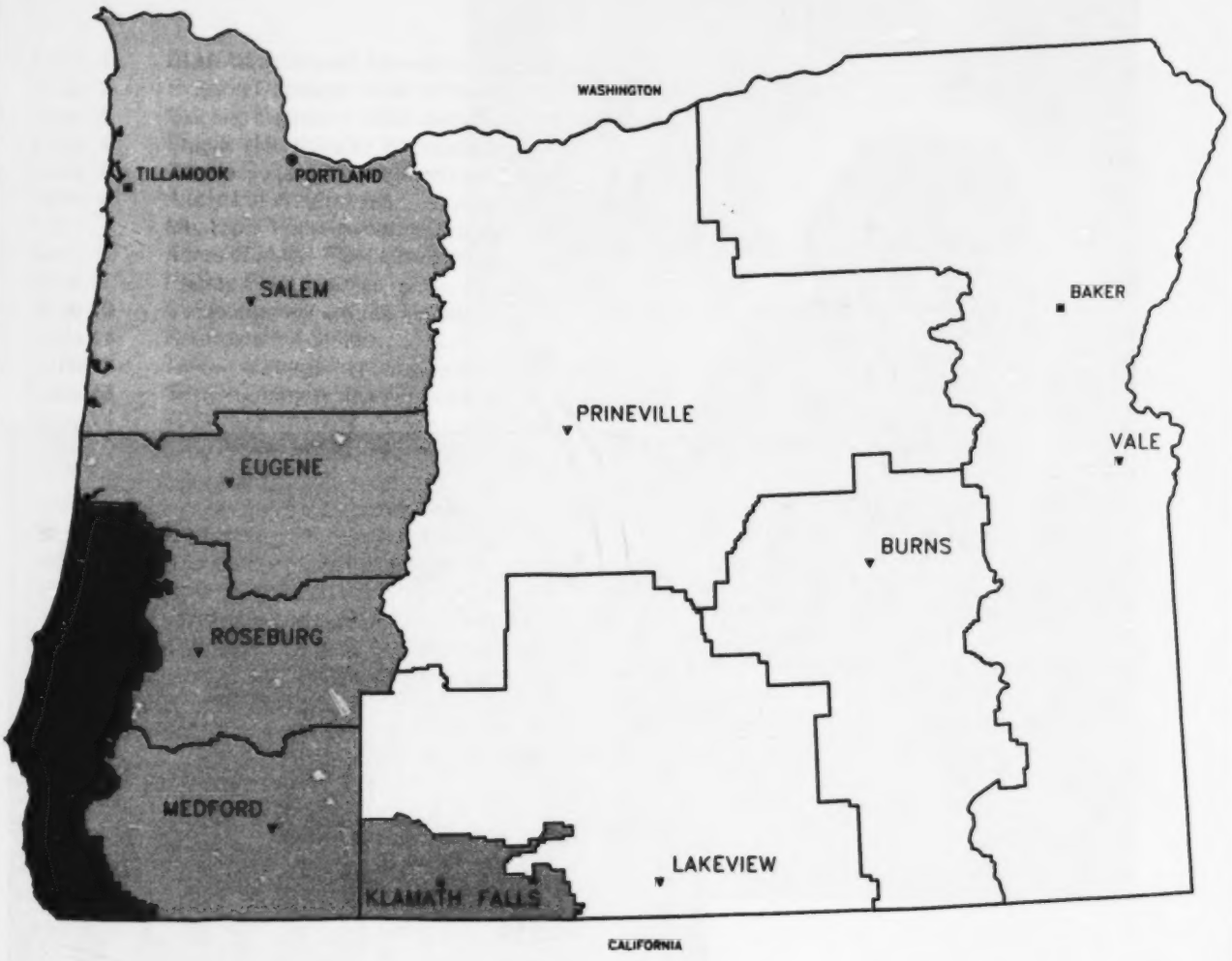


- BLM State Office
- BLM District Office
- BLM Resource Area Office
- District Boundary
- Klamath Falls Planning Area Boundary
- Coos Bay Planning Area
- Other Western Oregon Resource Management Planning Areas

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

COOS BAY DISTRICT

MAP 1

GENERAL LOCATION
COOS BAY PLANNING AREA

The Planning Area

The Coos Bay Resource Management Plan/Environmental Impact Statement (RMP/EIS) will analyze impacts associated with management of 329,161 acres of public land and 12,152 acres of subsurface mineral estate where the Bureau of Land Management (BLM) is the administering agency. This land is located in Curry, Coos, Douglas and Lane counties in western Oregon as shown in Table 1.

The general location of the planning area is noted by Map 1. Map 2 shows general land status within the planning area, and delineates the resource area and master unit boundaries.

Portions of the Siskiyou and Siuslaw National Forests (administered by the U.S Forest Service) are the other major federal lands within the planning area.

Preparation of the AMS is heavily dependent on the Bureau Automated Resource Data (ARD) and supporting Geographic Information System (GIS) technology. Acreage figures used in the AMS, unless noted, were derived from the ARD/GIS system and may not be the same as shown on the Master Title Plat (MTP). This difference may make direct comparisons between the AMS and previous planning documents difficult.

Review of Existing Decisions

Existing decisions and information in related environmental documents have been reviewed to determine which remain valid and may be used through the 1990s. This review followed the requirements of BLM Manual 1618.2. Not included in the review were existing right-of-way agreements, leases, permits, etc., which constitute valid existing rights through the 1990s.

Table 2 summarizes decisions which we have determined may be carried forward for continued implementation through the 1990s without further environmental analysis. These decisions will be common to all alternatives and will be restated or summarized to incorporate them into the resource management plan (RMP).

Table 3 summarizes decisions which, although determined to be valid for continued implementation through the 1990s, have not been addressed in an EIS or fully supported in terms of analysis. These valid decisions also will be common to all alternatives, but they will be analyzed in the environmental consequences section of the EIS. Any existing decisions not included in Tables 2 or 3 will be superseded and replaced by new decisions in the RMP.

Table 1. BLM-Administered Acreage in the Planning Area, by County

County	Public Land Administered by BLM (acres)[4]				Non-Federal Surface/ Federal Mineral Estate (acres)
	O&C[1]	CBWR[2]	PD[3]	Total	
Curry	79	0	31,785	31,864	2,589
Coos	96,968	59,702	9,676	166,346	7,828
Douglas	121,441	636	8,319	130,396	1,735
Lane	0	0	555	555	0
Total Acres	**218,488**	**60,388**	**50,335**	**329,161**	**12,152**

[1] Public lands granted to the Oregon and California Railroad Company and subsequently revested to the United States.
[2] Coos Bay Wagon Road Lands - Public lands granted to the Southern Oregon Company and subsequently reconveyed to the United States.
[3] Original federal lands which were not transferred to other jurisdictions and which continue to be managed by the United States.
[4] Acres are based on Master Title Plat

Table 2. Decisions Mandated by Congress or Supported by an EIS

1. Manage three (3) acres as Squaw Island Wilderness Area.

   a. Authority: PL-95-450.

   b. Administrative Unit: Tioga Resource Area.

   c. Status of Decision: Wilderness is being managed to the same level of intensity as the U.S. Fish and Wildlife Service is managing the Oregon Islands National Wildlife Refuge or the Oregon Islands Wilderness.

   d. Rationale for Continued Management: Congressionally Designated Wilderness.

2. Approximately 528 acres will be managed as Coos County Parks (Laverne, Rock Prairie, Judge Hamilton, Middle Creek and Frona).

   a. Authority: Act of Congress May 26, 1926 (Public Law 181).

   b. Administrative Unit: Tioga and Myrtlewood.

   c. Status of Decision: Management responsibility delegated to Coos County Commissioners.

   d. Rationale for Continued Management: Congressional Act.

3. Prepare sites for tree planting and maintain the plantations through an integrated vegetation management approach.

   a. Authority: FLPMA.

   b. Administrative Unit: All resource areas.

   c. Status of Decision: Record of Decision (ROD) for Western Oregon Program - Management of Competing Vegetation was signed _____ , and is being implemented through site-specific planning and environmental assessment.

   d. Rationale for Continued Management: Vegetation competing with young conifers on harvested sites need to be controlled in order to maintain sustained timber yields.

4. Control, and where possible, eradicate noxious weeds occurring on the district utilizing integration of all available techniques (biological, chemical, manual and mechanical methods, often in combination) to provide effective weed control.

   a. Authority: FLPMA.

   b. Administrative Unit: All resource areas.

   c. Status of Decision: ROD for the northwest area Noxious Weed Control Program was signed on April 7, 1986, and is being implemented through site specific planning and environmental assessment.

   d. Rationale for Continued Management: Noxious weeds need to be controlled to minimize spreading to forest lands, agricultural lands, private yards and gardens, etc.

Table 3. Decisions Not Addressed in an EIS or Fully Supported by Analysis

1. Manage approximately 77 acres as the Loon Lake Recreation Site.

   a. Authority: PLO 3869.

   b. Administrative Unit: Umpqua Resource Area.

   c. Status of Decision: Intensively managed as a Special Recreation Management Area.

   d. Rationale for Continued Management: Bureau has major investments in construction, operation and maintenance of this high use recreation facility.

2. Manage approximately 47 acres as communication sites.

   a. Authority: FLPMA.

   b. Administrative Unit: All resource areas.

   c. Status of Decision: On-going intensive management of nine sites by numerous organizations/individuals.

   d. Rationale for Continued Management: Each of the sites has been developed and is being utilized as a communication site. Many have considerable investments in permanent structures, provisions for power sources, etc. Opportunity for expanded use within allocated acreage exists.

3. Allow full development of 177 acres designated as high voltage transmission routes.

   a. Authority: FLPMA.

   b. Administrative Unit: All resource areas.

   c. Status of Decision: On-going intensive management.

   d. Rationale for Continued Management: Major investments in construction, operation and maintenance of transmission facilities with opportunity for expansion in designated routes.

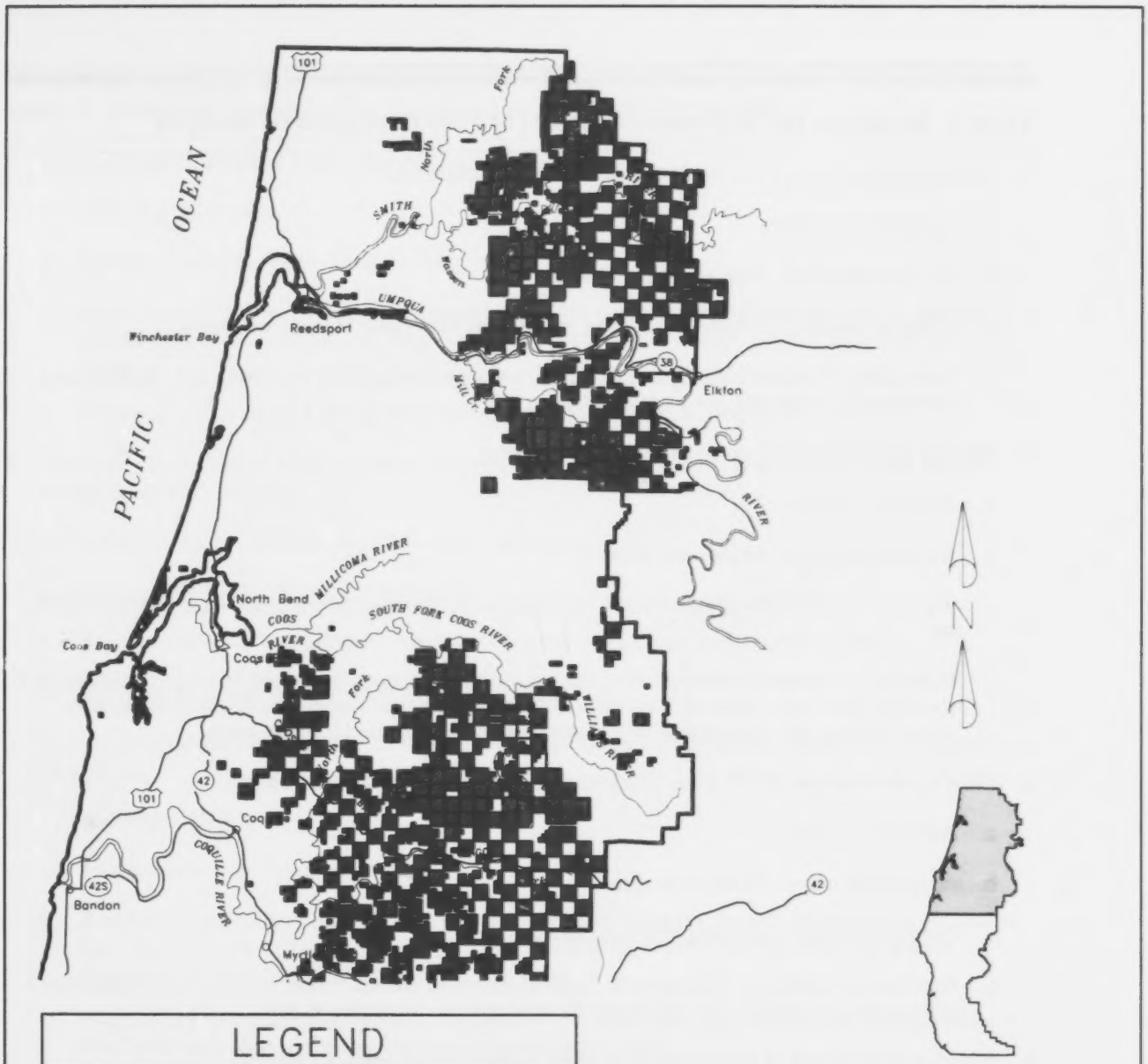
4. Allow full development of approximately 30 acres for the Elk Wallow Rock Quarry.

   a. Authority: FLPMA

   b. Administrative Unit: Tioga.

   c. Status of Decision: Developed source of crushed sandstone base rock.

   d. Rationale for Continued Management: Existing use has committed the site to a quarry, little, if any, opportunity to convert to any other resource use.



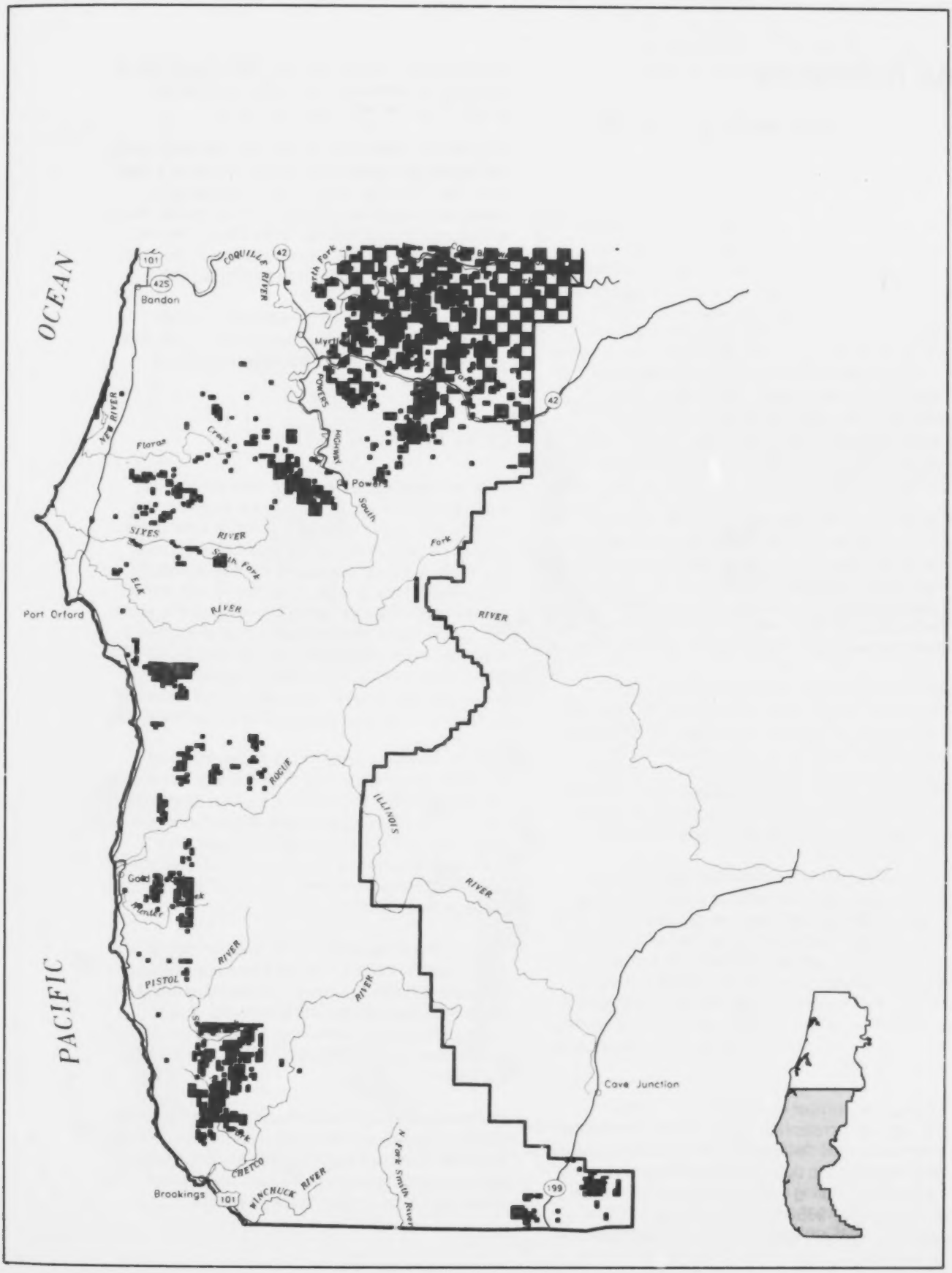
LEGEND

- District Office
- Interstate Highway
- U.S. Highway
- State Highway
- District Boundary
- Highway
- Stream
- Urban Area
- City
- BLM Managed Lands

COOS BAY DISTRICT
1990 AMS SUMMARY

10 0 10 20
MILES

MAP 2: LAND STATUS


OCEAN
PACIFIC
101
42S
Bandon
COQUILLE RIVER
42
Myrtle
Powers
SIXES RIVER
ELK RIVER
Port Orford
ROGUE
ILLINOIS
RIVER
Gold
PISTOL
RIVER
CHETCO
Brookings
101
WINCHUCK RIVER
Cave Junction
199

Air Resources

Congress passed the Clean Air Act in 1967 and amendments to the Act in 1972 and 1977. This law gives the State of Oregon responsibility for administration and enforcement of air quality standards along with visibility standards in Class I areas (special areas protected for their air quality related values during the period of high recreational use; specifically, Crater Lake National Park and certain wilderness areas), through the State Implementation Plan (SIP). The SIP also specifies a 22 percent reduction in emissions (compared with 1982-1984 emissions) by the end of the year 2001, with a review in 1990 to determine whether or not "reasonable progress" has been made. The State Visibility Protection Plan, adopted in 1986, substantially constrains slash burning from July 4 through Labor Day, to reduce the frequency of visibility impairment in Class I areas.

The Oregon Smoke Management Plan, which is companion to the SIP, classified certain areas as "designated areas" and "smoke sensitive areas." The current management plan requires that prescribed burning (which is primarily slash burning) be done only when atmospheric conditions prevent smoke from deteriorating air quality of these areas.

Map 3 shows those "designated areas", Class I areas, and Class II areas with potential of becoming Class I areas (wilderness areas over 10,000 acres) that have the potential of being affected by the district's prescribed burning activities. Non-attainment areas (areas not in compliance with air quality standards), which may also be affected, are Eugene/Springfield, Grants Pass and Medford/Ashland.

Smoke emissions from prescribed burning are dependent primarily on whether slash is broadcast burned or piled and burned, tree species burned, the amount of fuel, the proportion of the fuel consumed by the fire, and weather conditions. Approval of burning is unlikely when smoke dispersal is poor. Average fuel (biomass) consumption is estimated to have declined from 60.3 tons per acre burned during the baseline period of 1976-1979 to 44 tons per acre burned by 1984.

Although the number of acres of slash burned annually has increased in recent years, the total fuel consumption has decreased. Average annual district slash consumption during the baseline period was 120,363 tons, during 1982-84 it was 117,774 tons, and during the 1985-1988 period it was 113,324 tons. The 1985-88 figure is a four percent reduction from 1982-84. During the 1985-1988 period three of the 294 BLM burns in the planning area caused smoke intrusions into designated areas.

In addition to adherence to seasonal and other timing restrictions imposed by the Oregon Smoke Management Plan, BLM has taken many other steps to reduce emissions from burning. These include mass ignition, aggressive mop-up, slash piling, firewood sales and burning only where considered necessary to reduce fire hazard or make planting possible.

Opportunities that can be considered to further reduce emissions include increased wood utilization and use of alternative site preparation methods where feasible.

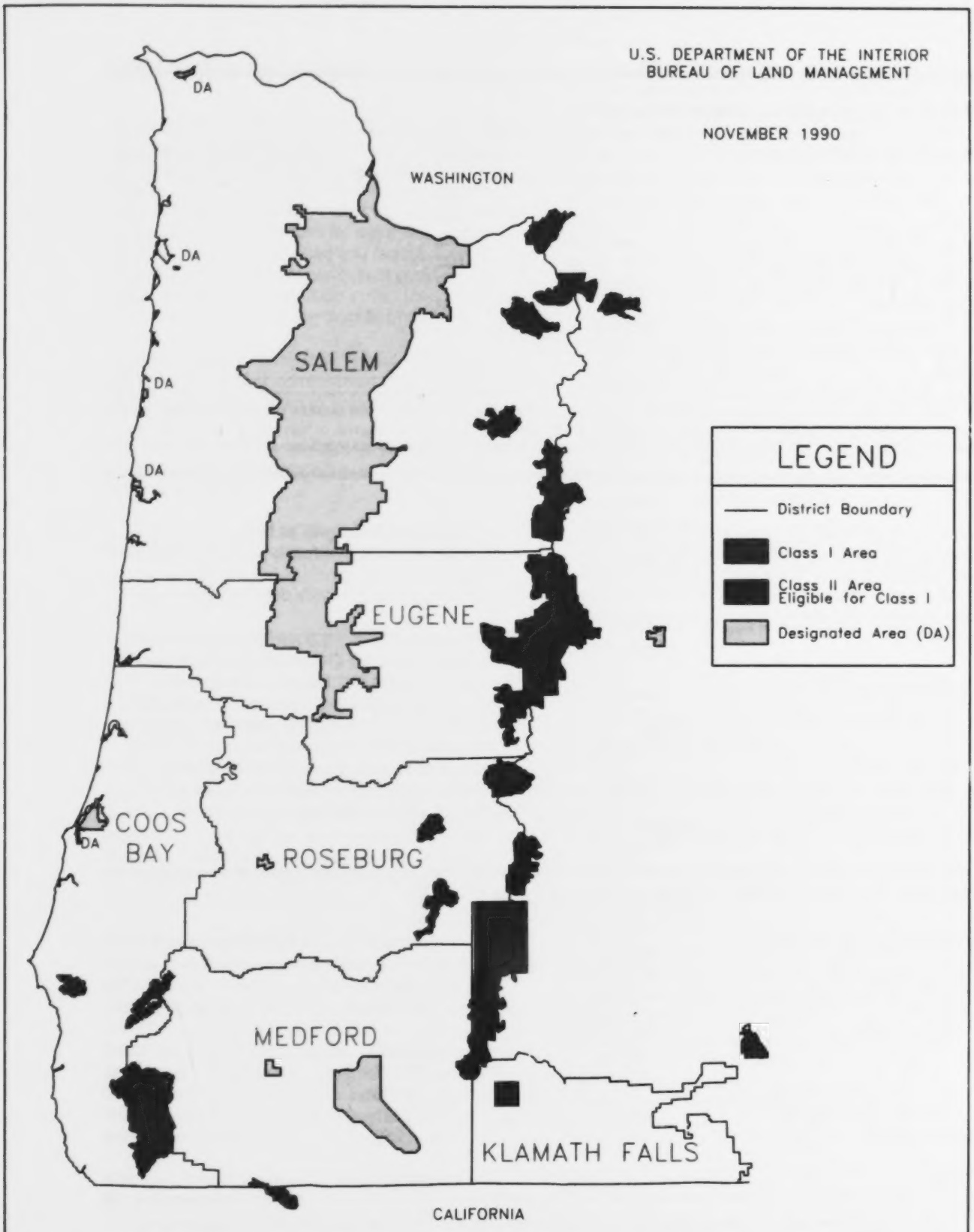
Soil Resources

Soils are essential to life. They store and deliver water to streams and lakes, and are a medium for plant growth. Soil productivity refers to soils' ability to produce vegetation. Good production requires that the soil provide adequate moisture, aeration, nutrients, and anchorage. A number of soil properties are recognized as particularly important to plant production, these include organic matter content, nutrients, texture, structure, porosity, and depth. The most common kinds of soil disturbance caused by timber management activities are soil displacement, compaction, erosion, and alteration of nutrient status.

Table 4 shows the portion of BLM-administered forest lands in the planning area that was identified in the recent Timber Production Capability Classification (TPCC) inventory as fragile non-suitable woodland. This land is considered inappropriate for planned timber harvest due to fragile soil characteristics which create uncertainty about its capability to be managed for a sustained yield of timber.

Table 5 shows the portion of BLM-administered forest lands in the planning area that was identified as fragile-suitable, restricted. These lands would be subject to unacceptable soil productivity loss if managed for timber production without application of special restrictive or mitigation measures to assure protection.

Soil productivity has been affected by management activities, including road construction, timber harvest activities, slash burning and other site preparation activities, which can cause erosion and nutrient losses and reduce water holding capacity.



MAP 3: SENSITIVE AIR QUALITY AREAS

Table 4. Fragile Non-suitable Woodland *

Classification of Woodland	Acres	% BLM Forest Land Base
Soil Moisture	335	0.1
Nutrient	1,337	0.4
Slope Gradient	28,863	9.3
Mass Movement Potential	622	0.2
Surface Erosion Potential	17	0.0
Groundwater	132	0.0
Total	**31,306**	**10.0**

* These are lands where the timber growing potential will be reduced due to the soils having critical moisture supplying capacities, severe nutrient problems, critical slope gradients, mass movement potential, severe surface erosion potential, or high ground water levels. See the "TPCC Classification" BLM Manual Supplement, Oregon State Office, Handbook 5251-1 for more detailed description.

To mitigate soil productivity losses related to timber harvest and site preparation, the district has applied standards to limit the aereal extent of soil compaction to 12 percent of a harvested unit, and has employed one or more of the following practices, where appropriate:

- designation of skid trails
- ripping of skid trails after logging
- limiting tractor yarding to the dry season
- requiring one-end or full log suspension when cable yarding
- prescribed burning when the duff is moist, to achieve cool burns
- using alternatives to broadcast burning
- putting unsurfaced roads "to bed"
- seeding, mulching and fertilizing road cutbanks, fill slopes and landings
- leaving large down woody debris on site

Current management practices have not, however, entirely eliminated soil productivity losses caused by management activities. Opportunities to further reduce or mitigate those losses include fertilization, expansion of practices already employed, extending rotation ages on the poorer site classes and utilization of soil types and related capability units to develop management strategies to reduce growth loss impacts to less than one percent.

Table 5. Fragile-Suitable, Restricted Forest Land *

Classification of Woodland	Acres	% BLM Forest Land Base
Soil Moisture	4,859	1.6
Nutrient	2,295	0.7
Slope Gradient		
FGR1	68,831	22.3
FGR2	87,217	28.2
Mass Movement Potential	4,186	1.3
Surface Erosion Potential	161	0.1
Groundwater	252	0.1
Total	**167,801**	**54.3**

* These are lands where the timber growing potential may be reduced as a result of inherent soil limitations including critical moisture supplying capacities, severe nutrient problems, critical slope gradients, mass movement potential, severe surface erosion potential, or high ground water levels. Special harvest and/or restrictive measures are required. See the "TPCC Classification" BLM Manual Supplement, Oregon State Office, Handbook 5251-1 for more detailed description.

Water Resources

For purposes of analysis in the environmental impact statement, the planning area has been divided into analytical watersheds, as shown in Table 6 and on Map 4. This table was inteded to display riparian zone acreage on BLM administered lands, as well as a calculated condition index for many watersheds. Since we have not yet tested and refined our technique for this calculation, however, it could not be completed in time for inclusion in the table. We plan to include these data in the Draft RMP/EIS.

Municipal water systems drawing water from watersheds including BLM-administered lands in the planning area, are shown in Table 7 and on Map 4.

The following watersheds (or subwatersheds) are considered particularly sensitive to activity for the reasons identified:

- Portions of the Middle Umpqua Frontal and Loon Lake - Camp Creek watersheds have high landslide potential, due to steep slopes and heavy rainfall.

- The Smith River, Loon Lake - Camp Creek, Middle Umpqua Frontal, South Fork Coos, East Fork Coquille and Middle Fork Coquille watersheds are close to or violate water quality standards for temperature.

The Coquille and Coos River Systems are considered by the Oregon Department of Environmental Quality to be "water quality limited" due to sediment problems. The analytical watershed includes only the upper watershed. The total watershed is approximately 238,080 acres, of which less than 25 percent is BLM-administered land.

Ground water in the coastal area is a limited resource. With the exception of the North Spit aquifer, there is a lack of baseline information available to adequately assess the current status of ground water quantity or quality, but geologic conditions generally do not favor water accumulation. This limited ground water supply could restrict industrial development within the district, especially for industries requiring high volumes of water, such as pulp mills or coal gasification plants.

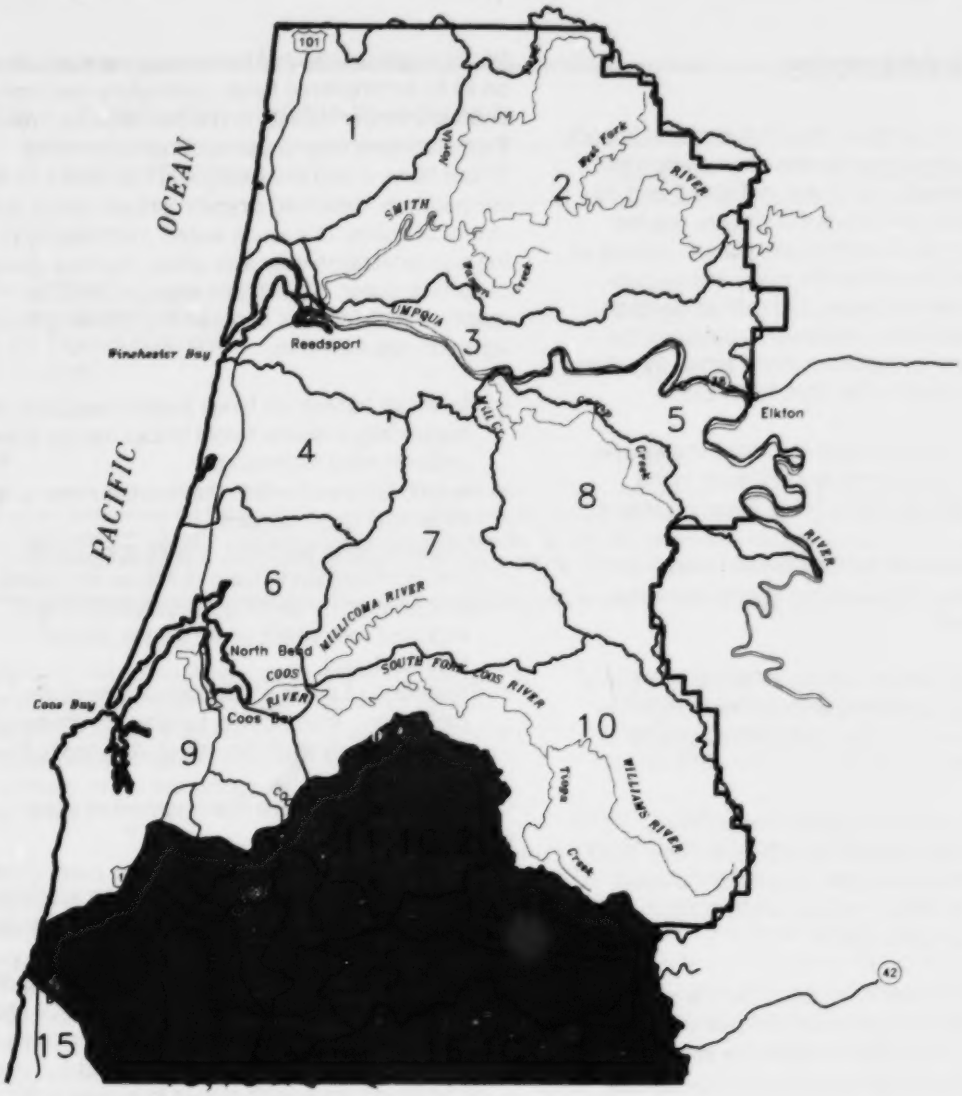
Well water within the coastal areas is generally highly mineralized.

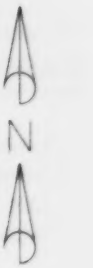
Water quality is affected by management activities on BLM-administered lands, particularly road construction, timber harvest and slash disposal. All of these activities may cause sedimentation while timber harvest and slash disposal may affect stream temperature, dissolved oxygen concentrations and chemical quality of surface water. Herbicide spraying and fertilization may also affect chemical quality of surface water. To mitigate impacts on water quality, the district has imposed the following management requirements:

- No timber harvest on lands judged incapable of supporting sustained yield timber management under current technology.
- No timber harvest within the riparian zone on third order and larger streams.
- Special logging practices, where appropriate.
- Road construction to state-of-the-art standards.
- Revegetation by seeding or hydromulching of exposed soils which could lead to stream sedimentation.
- Prevention of direct application of chemicals (herbicides, insecticides, fertilizer) to stream or open water through the use of distance buffers.

Opportunities to improve management of water quality include:

- Designation of undisturbed watershed associated with lands protected for other purposes, for study as control watersheds.
- Provide a minimum 75-foot no-disturbance buffer on all streams to maintain stream channel and bank integrity, maintain stream temperatures and filter sediments from upslope activities.
- All headwall areas with slopes in excess of 80 percent, or classified by the TPCC as FGNW or FGR2, could be withdrawn from timber management activities.
- Develop models to predict the impacts of management practices on watershed resources.
- Surface all roads constructed and close or restrict the use of collector roads adjacent to streams to the dry season of the year.
- Avoid disturbance or utilize extended rotations on all sites classified fragile by the TPCC.
- Introduce conifer seedlings into riparian areas currently vegetated with salmonberry and alder.





LEGEND

- District Office
- Interstate Highway
- U.S. Highway
- State Highway
- District Boundary
- Highway
- Stream
- Urban Area
- City
- 21 Analytical Watershed
- 3C Community Watershed

COOS BAY DISTRICT
1990 AMS SUMMARY

MAP 4: ANALYTICAL AND COMMUNITY WATERSHEDS

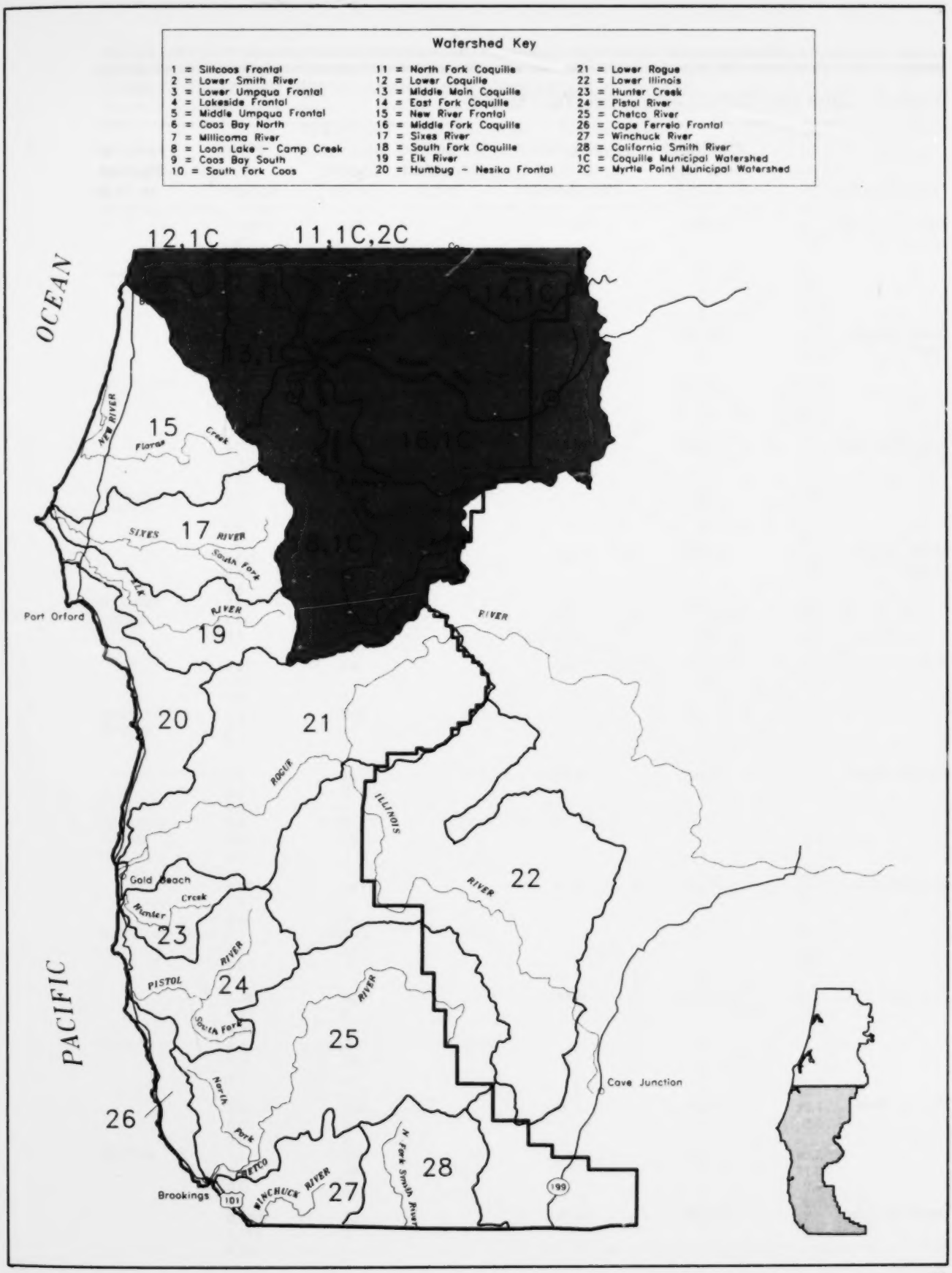

Watershed Key
1 = Siltcoos Frontal
2 = Lower Smith River
3 = Lower Umpqua Frontal
4 = Lakeside Frontal
5 = Middle Umpqua Frontal
6 = Coos Bay North
7 = Millicoma River
8 = Loon Lake - Camp Creek
9 = Coos Bay South
10 = South Fork Coos
11 = North Fork Coquille
12 = Lower Coquille
13 = Middle Main Coquille
14 = East Fork Coquille
15 = New River Frontal
16 = Middle Fork Coquille
17 = Sixes River
18 = South Fork Coquille
19 = Elk River
20 = Humbug - Nesika Frontal
21 = Lower Rogue
22 = Lower Illinois
23 = Hunter Creek
24 = Pistol River
25 = Chetco River
26 = Cape Ferrelo Frontal
27 = Winchuck River
28 = California Smith River
1C = Coquille Municipal Watershed
2C = Myrtle Point Municipal Watershed
12,1C
11,1C,2C
OCEAN
PACIFIC
15
17
19
20
21
22
23
24
25
26
27
28
Port Orford
Gold Beach
Brookings
Cave Junction
101
199

Table 6. Coos Bay District Analytical Watersheds

Watershed Name	Analytical Watershed Acres	%Watershed in BLM Management	Watershed Condition Index	Stream Order [1]	Miles of Stream [2]	Acres of Riparian on BLM
Lower Smith River	187,681	33.91		1&2	1,002.1	
				3	129.6	
				4	81.8	
				5	39.4	
				6+	63.0	
				L	0.44	
Lower UMpqua Frontal	109,157	14.96		1&2	326.0	
				3	42.6	
				4	22.8	
				5	18.9	
				6+	16.6	
				L	0.4	
Loon Lake-Camp Creek	84,652	28.87		1&2	313.4	
				3	56.3	
				4	24.8	
				5	22.0	
				6+	19.2	
				L	4.2	
Middle Umpqua Frontal	51,593	31.96		1&2	283.9	
				3	36.0	
				4	18.6	
				5	12.9	
				6+	36.9	
				L	0.0	
Siltcoos Frontal	78,891	1.44		1&2	76.5	
				3	7.4	
				4	4.7	
				5	3.3	
				6+	0.0	
				L	0.0	
Lakeside Frontal	62,388	0.01		1&2	0.0	
				3	0.0	
				4	0.0	
				5	0.0	
				6+	0.0	
				L	0.0	
Coos Bay North	67,107	2.13		1&2	76.5	
				3	8.7	
				4	6.8	
				5	1.0	
				6+	4.7	
				L	0.0	
Coos Bay South	91,203	4.14		1&2	192.3	
				3	29.4	
				4	15.5	
				5	5.4	
				6+	9.7	
				L	0.0	
Millicoma River	96,430	0		1&2	20.9	
				3	3.8	
				4	2.0	
				5	0.1	
				6+	2.1	
				L	0.0	
South Fork Coos	158,066	19.78		1&2	954.9	
				3	127.7	
				4	62.9	

Table 6. Coos Bay District Analytical Watersheds (Continued)

Watershed Name	Analytical Watershed Acres	% Watershed in BLM Management	Watershed Condition Index	Stream Order [1]	Miles of Stream [2]	Acres of Riparian on BLM
South Fork Coos (continued)				5	26.5	
				6+	55.6	
				L	0.2	
Lower Coquille	61,613	0.53		1&2	22.0	
				3	3.7	
				4	3.7	
				5	0.4	
				6+	0.0	
				L	0.0	
Middle Main Coquille	66,146	3.32		1&2	277.3	
				3	33.5	
				4	25.9	
				5	12.2	
				6+	7.5	
				L	0.0	
South Fork Coquille	160,022	4.90		1&2	618.5	
				3	63.1	
				4	34.4	
				5	18.7	
				6+	21.6	
				L	0.0	
East Fork Coquille	84,824	54.79		1&2	768.3	
				3	107.6	
				4	51.6	
				5	30.7	
				6+	39.8	
				L	0.0	
Middle Fork Coquille	197,858	32.36		1&2	1,463.1	
				3	219.2	
				4	102.6	
				5	71.7	
				6+	46.9	
				L	5.8	
North Fork Coquille	102,194	36.59		1&2	679.7	
				3	114.9	
				4	57.8	
				5	26.5	
				6+	63.2	
				L	0.0	
New River Frontal	103,079	3.58		1&2	479.3	
				3	67.2	
				4	40.0	
				5	11.9	
				6+	25.3	
				L	11.2	
Sixes River	82,347	2.65		1&2	571.5	
				3	62.5	
				4	27.6	
				5	19.1	
				6+	26.1	
				L	0.0	
Elk River	58,542	1.57		1&2	96.2	
				3	11.6	
				4	2.4	
				5	0.0	
				6+	12.2	
				L	0.0	

Table 6. Coos Bay District Analytical Watershed (Continued)

Watershed Name	Analytical Watershed Acres	% Watershed In BLM Management	Watershed Condition Index	Stream Order [1]	Miles of Stream [2]	Acres of Riparian on BLM
Humbug-Nesika Frontal	56,828	8.29		1&2	401.2	
				3	56.0	
				4	26.4	
				5	14.5	
				6+	12.8	
				L	7.9	
Lower Rogue	211,276	1.81		1&2	320.1	
				3	30.1	
				4	12.6	
				5	2.7	
				6+	24.1	
				L	1.9	
Lower Illinois	296,781	0.35		1&2	75.8	
				3	1.4	
				4	0.0	
				5	1.5	
				6+	1.4	
				L	0.0	
Hunter Creek	28,227	13.30		1&2	138.0	
				3	18.8	
				4	8.8	
				5	4.4	
				6+	10.8	
				L	0.0	
Pistol River	74,864	4.18		1&2	173.2	
				3	19.8	
				4	13.3	
				5	2.8	
				6+	9.0	
				L	0.0	
Cape Ferrelo Frontal	22,197	0.20		1&2	78.5	
				3	9.8	
				4	0.1	
				5	0.0	
				6+	0.0	
				L	0.0	
Chetco River	221,711	4.86		1&2	227.8	
				3	31.9	
				4	12.9	
				5	8.8	
				6+	8.6	
				L	0.0	
Winchuck River	44,001	0.00		1&2	0.0	
				3	0.0	
				4	0.0	
				5	0.0	
				6+	0.0	
Calif. Smith River	60,026	0.00		1&2	0.0	
				3	0.0	
				4	0.0	
				5	0.0	
				6+	0.0	

[1] Stream Order - A hydrological system of stream classification. Each small unbranched tributary is a first order stream. Two first order streams join to form a second order stream. A third order stream has only first and second order tributaries, and so forth.
[2] Miles of stream include all streams within the watershed and within the WODDB Project Area.
- Abbreviations used in this table: 6+ = Sixth Order and above streams, L = Lakes.

Table 7. Municipal Water Systems

Watershed Name	System Type: System Name	System Type: Surface (S) Ground (G)	Population Served	Filtered (YorN)	Watershed Area (Acres): BLM	Watershed Area (Acres): Other	Watershed Area (Acres): Total
North Fk. Coquille	Myrtle Point	S	1,100	Y	83,865	103,153	187,018
Coquille River	Coquille, City of	S	1,600	Y	157,931	453,113	611,044

Vegetation

Table 8 shows the acres of major plant groupings on BLM-administered lands in the planning area, and the acres of the seral stages (a series of plant communities which develop during ecological succession) in that grouping.

There are seven known wetland (permanently wet or intermittently flooded area) locations on BLM-administered lands in the planning area, totalling 528 acres. Other unique ecosystems identified on BLM-administered lands are discussed as special habitat features, under Animals, later in this summary. Those sites reviewed for their potential as research natural areas (RNAs) and/or areas of critical environmental concern (ACECs), are discussed under Special Areas later in this summary.

The following noxious weeds occur on BLM-administered lands in the planning area: tansy ragwort, scotch broom, Canada thistle, gorse and purple loosestrife.

Table 9 shows the threatened and endangered plant species, plus federal proposed and candidate species, state listed species and bureau sensitive species (all referred to as priority plant species) occurring on BLM-administered lands in the planning area. Since 1980, approximately 9,000 acres of the district have been inventoried for priority plants.

Current management provides the following protection and mitigation for priority plants, unique ecosystems and wetlands.

- All BLM activities must comply with the Endangered Species Act. Objectives are to recover federally listed species and to protect other species to the extent needed to make their official listing unnecessary. An active inventory program to determine the locations of priority plant species, so impacts can be avoided, is linked to proposed locations of other activities such as timber sales. Monitoring for the nine federal candidate species has been conducted since 1985, to determine their biological requirements and population dynamics. Monitoring to determine the effects of activities on species with high potential for federal listing, is also occurring. Cooperation, coordination and consultation with the U.S. Fish and Wildlife Service takes place when appropriate.
- RNAs and ACECs are protected from incompatible uses.
- Wetlands are managed to protect their natural values.
- Several unique ecosystems have had specific management plans developed providing additional guidance. These include the New River ACEC Management Plan, the Dean Creek Elk Viewing Area Habitat Management Plan (HMP) and the Draft Coos Bay Shorelands Management Plan.

Noxious weed control, rather than eradication of tansy ragwort and gorse, is the thrust in the district. Control methods are selected as part of an integrated pest management program which provides for use of all available techniques (including herbicides where appropriate). All control is done as part of a coordinated program conducted by the Oregon Department of Agriculture.

Major opportunities to improve our protection and mitigation include:

- Designate as ACEC's areas which have the opportunity to fill Oregon Natural Heritage Plan cell needs.
- Implement land exchanges to consolidate large populations of priority plants under BLM administration.
- Place structures in streams with degraded riparian ecosystems to improve or restore the water table.

Table 8. Acres of Major Plant Groupings and Seral Stages

Plant Group (Age Class)	Early (0-10)	Mid (20-30)	Late (40-80)	Mature (90-190)	Old Growth (200 +)	Total
D/RA/Sm	29040	32650	15540	23740	13640	114610
D/RA/Vm	32410	33710	20040	22740	30490	139390
D/M-To	7660	3530	10880	18210	1320	41600
D/B/Sa	3830	3070	450	1410	3420	12180
MC/IV/Gr	840	40	450	570	1170	3070
Total	**73780**	**73000**	**47360**	**66670**	**50040**	**310850**

Abbreviations used in this table:

D/RA/Sm = Douglas-fir/Red Alder/Salmonberry
D/RA/Vm = Douglas-fir/Red Alder/Vine maple
D/M-To = Douglas-fir/Madrone-Tanoak
D/B/Sa = Douglas-fir/Mixed Brush/Salal
MC/IV/Gr = Mixed Conifer/Interior Valley/Grass

NOTE: Age class defines a 10-year period of time, with the mid-point accepted as the age class break. For example, stands in age class 20 have an actual age between 16 and 25 years.

Table 9. Priority Plant Species

Scientific Name	Common Name	Status
Abronia umbellata ssp. *breviflora*	Pink sand verbena	FC, SE
Allium bolanderi	Bolander's onion	AS
Bensoniella oregana	Bensonia	FC
Brodiaea terrestris	Dwarf brodiaea	AS
Calypogeja sphagnicola	Liverwort	AS
Campylopus aureus	Moss	AS
Cardamine gemmata	Purple toothwort	BS
Clintonia andrewsiana	Red clintonia, Andrew's Bead Lily	AS
Cordylanthus maritimus ssp. *palustris*	Salt-marsh bird's-beak	FC
Cupressus bakeri Jeps.	Baker's cypress	AS
Cypripedium fasciculatum	Clustered Lady's Slipper	AS
Dudleya farinosa	Sea-cliff stonecrop	AS
Encalypta brevicolla var. *crummiana*	Moss	BS
Fritillaria glauca	Siskiyou fritillaria	AS
Gentiana setigera	Waldo gentian	FC
Haplopappus arborescens	Golden fleece	AS
Hieraceum bolanderi	Bolandor's hawkweed	AS
Hydrocotyle verticillata	Whorled marsh-pennywort	AS
Iliamna latibracteata	California globe-mallow	AS
Lasthenia macrantha ssp. *prisca*	Large-flowered goldfields	FC
Lathyrus delnorticus	Del Norte pea	AS
Lilium occidentale	Western bog lily	FC, SE
Lilium rubescens	Lilac lily	BS
Limbella fryei	Moss	BS
Lycopodium inundatum	Bog club-moss	AS
Microcala quadrangularis	Microcala	AS
Microseris bigelovii	Coast microseris	AS
Microseris howellii	Howell's microseris	FC
Mimulus douglasii	Douglas' monkey flower	AS
Monardella purpurea	Siskiyou monardella	AS
Oenothera wolfii	Wolf's evening-primrose	FC
Ophioglossum vulgatum	Adder's-tongue	AS
Phacelia argentea	Silver phacelia	FC
Polystichum californicum	California Swordfern	AS
Sidalcea hendersonii	Henderson's sidalcea	AS
Triteleia laxa	Ithuriel's spear	AS
Viola lanceolata ssp. *occidentalis*	Western bog violet	BS

Abbreviations used in this table:

AS = Assessment species
BS = Bureau sensitive
FC = Federal candidate, threatened or endangered
SE = State endangered, listed

Timber Resources

There are about 1,144,000 million cubic feet of standing timber volume on BLM-administered land in the planning area which could be managed for a continuous harvest. This is roughly equivalent to 6,967,000 million board feet Scribner short log scale. (Note: A cubic foot is equal to a block of solid wood one foot high, one foot wide, and one foot thick; a board foot is one foot by one foot by one inch thick.) These figures are according to an inventory completed in 1988. That compares to 1,359,000 million cubic feet (8,491,500 million board feet Scribner) in the inventory completed in 1978. The age class distribution for both inventories is shown in Table 10.

Reforestation status is shown in Table 11.

Table 12 shows timber management and forest development accomplishments projected for the 10 years of 1983 to 1993 in the current plan for the planning area, and actual accomplishments through 1988.

The annual volume of wood harvested from all ownerships in Coos, Curry and Douglas counties averaged 1,959 million board feet (Scribner log scale) from 1984 through 1988. Of that volume, 500 million came from national forest lands and 506 million from lands administered by BLM.

Current harvesting practices are as follows:

- Clearcutting. Stands with a minimum age of 40 years are eligible for harvest as a means of maintaining a high sustained yield harvest level.
- Salvage logging of dead and dying trees.

The Timber Production Capability Classification (TPCC) inventory is summarized in Table 13. The suitable woodland and suitable commercial forest land categories provide opportunities for sustained harvest of forest products, with the exception of lands included in Congressionally-designated areas or developed recreation sites.

Table 14 summarizes, for comparison, the 1977 TPCC.

There are some basic differences between the two inventories that make direct comparisons difficult. The most significant change for the Coos Bay District is the addition of the Woodland category in the 1988 TPCC inventory. Lands classified into the suitable Woodland category would not contribute to the allowable sale quantity for timber but would contribute to the harvest of forest products such as firewood, etc. Under the 1977 TPCC inventory, those same lands, in most cases, would have been withdrawn from the allowable harvest base.

We have calculated what the highest potential sustained yearly timber sale volume could be based on the TPCC, the new timber inventory, assumptions about yield enhancement from forest management practices, and stream protection we consider necessary to meet water quality standards. That highest estimate, for the decade of the plan, is 46.7 million cubic feet (about 296.9 million board feet, Scribner short log scale).

This highest potential sustained yield level is based on the following assumptions:

- Available funding for all practices.
- Emphasis on the timber management system and regeneration system that would maximize timber production.
- Efficiency of field operations and assurance of prompt reforestation would be considered in selecting the size of timber harvest units.
- All available tools (including herbicides) would be used for site preparation, seedling protection, plantation maintenance and release, with emphasis on those tools that have proven to be most effective in assuring seedling survival and growth.
- Reforestation of harvested lands would occur immediately after harvest with adaptable commercial species. Genetically improved stock would be used in accordance with the Western Oregon Tree Improvement Plan.
- Tree seed orchards would be managed to produce adequate supplies of improved seed.
- Root disease centers would be reforested with indigenous resistant tree species.
- Initial spacing control of seedlings/saplings through planting or thinning in conjunction with the control of competing vegetation would be used in order to maximize wood production by concentrating site resources in individual tree growth.
- Commercial thinning of present and future stands would be conducted on those lands judged operable and where research indicates increases in timber production are likely.

Table 10. Comparison of District Inventory Data 1978 and 1988

Age Class	Acres		Cubic Volume		Board Foot Volume	
	1978	1988	1978	1988	1978	1988
0	56,488	39,926	0	0	0	0
10	38,489	30,999	0	0	0	0
20	16,890	38,684	0	43,963	0	233,332
30	9,734	24,101	23,326	72,277	123,161	381,623
40	16,341	10,508	52,120	50,453	286,660	277,492
50	4,391	15,064	17,355	76,988	98,056	434,982
60	6,276	7,208	29,405	39,933	170,255	231,212
70	5,400	3,709	29,095	25,726	171,951	152,041
80	11,751	3,826	71,217	31,984	427,302	191,904
90	4,439	3,655	29,754	35,099	180,607	213,051
100	4,084	9,015	29,875	86,273	183,134	528,853
110	12,476	8,259	98,525	81,386	608,884	502,965
120	14,658	5,111	123,847	50,510	771,567	314,677
130	6,092	8,881	54,650	83,888	342,656	525,978
140	1,534	5,625	14,515	61,727	91,444	388,880
150	3,353	2,649	33,275	25,531	210,631	161,611
160	2,279	623	23,599	6,114	149,854	38,824
170	0	1,664	0	24,584	0	92,900
180	3,160	1,252	35,162	12,840	223,982	82,048
190	1,021	7,228	11,709	75,140	75,055	481,647
200	8,571	128	100,956	1,330	648,138	8,539
210	1,021	2,464	12,313	26,936	79,173	173,198
220	0	11,049	0	114,095	0	734,772
230	9,216	144	115,476	1,555	743,665	10,014
240	2,279	1,463	28,989	15,466	186,979	99,756
250	4,889	130	62,970	1,637	406,157	10,559
260	2,536	242	32,992	1,850	212,798	11,932
270	6,937	959	90,939	7,686	586,557	49,575
280	0	278	0	2,784	0	17,957
290	0	8,206	0	4,187	0	26,964
300	5,887	88	77,868	868	501,470	5,590
310	1,021	407	13,483	3,720	86,831	23,957
320	0	704	0	6,873	0	44,193
330	0	47	0	479	0	3,080
340	0	44	0	445	0	2,857
350	5,899	277	75,629	2,649	484,782	16,980
360	0	539	0	5,203	0	33,299
370	459	51	5,713	194	36,506	1,240
380	0	0	0	0	0	0
390	0	1,229	0	11,586	0	73,803
400	3,300	0	38,478	0	244,720	0
410 +	3,635	7,615	25,728	60,682	158,484	384,724
Total	**274,506**	**264,061**	**1,358,964**	**1,144,641**	**8,491,459**	**6,967,009**

1978 Avg. BF/CF ratio=6.25
1988 Avg. BF/CF ratio=6.09

Note:Age class defines a 10-year period of time, with the mid-point accepted as the age class break.For example, stands in age class 20 have an actual age between 16 and 25 years.

Note:1978 acres based on Master Title Plat, 1988 acres based on GIS.

Table 11. Reforestation Status as of October 1, 1988

	Acres by Age				Total
	1 - 5	6 - 15	16 - 25	26 - 35	
Understocked					
Unestablished	90	1,325	347	33	1,795
Established	121	830	2,040	229	3,220
Stocked					
Unestablished min.	352	1,082	108	0	1,542
Unestablished target	11,585	20,265	1,134	61	33,045
Established min.	470	2,944	9,411	5,826	18,651
Established target	2,031	3,700	11,425	11,857	29,013

Terms used in this table:

- Unestablished Stand: A reforestation unit with trees still in danger of mortality, that may require measures to maintain the desired stocking levels.
- Established Stand: A reforestation unit with trees that are judged to be in no danger of mortality and no longer require measurers to ensure survival.
- Understocked Established: An established stand that does not meet minimum stocking standards.
- Minimum Stocking: A lower level of stocking that does not achieve full site occupancy in young stands, but which is capable of full final harvest yields and partial commercial thinning yields.
- Target Stocking: A stocking standard that represents the number of trees needed for full site occupancy and optimal timber yields. This standard is designed to achieve full commercial thinning yields as well as a full final harvest.
- Stocked-Unestablished Minimum: An unestablished stand that meets minimum stocking levels.
- Stocked-Target Unestablished: An unestablished stand that meets target stocking levels.
- Stocked Established Minimum: An established stand that meets the minimum stocking standards of well-spaced trees per acre.
- Stocked Established Target: An established stand that meets the target stocking standards of well-spaced trees per acre.

Table 12. Timber Management and Forest Development Accomplishments

Practice	Average Annual Planned for 10 years	Average Annual Accomplished in 6 Years
Allowable Harvest Sold		
Million Cubic Feet	39.9	27.5
Million Board Feet Buyback[1]	0	6.6
Million Board Feet	254	181.4
Million Board Feet Buyback[1]	0	43.9
Harvest Acres Sold		
Clearcut Acres	4,000	3411
Clearcut Acres Buyback[1]	0	726
Site Preparation Acres		
Broadcast Burning	4,900	3055
Herbicide	850	0
Other [2]	0	804
Brush and Hardwood Conversion Acres	550	15
Planting Acres		
Normal Stock	5,700	3053
Genetic Stock	800	489
Animal Damage Control Acres	950	
Tubing		2716
Trapping/Baiting		231
Plantation Release Acres	5,100	
Herbicide		0
Manual		769
Precommercial Thinning Acres	3,350	1915
Fertilization Acres	4,500	198

[1]Volume and acres sold as a result of "Buyback" legislation in 1984. Timber bought back by BLM was resold as part of regular sale commitment.
[2]Other practices include forage seeding, spot burning or hand piling.

Table 13. TPCC Summary as of October 1, 1988

	Acres [1]			
	O&C	PD	CBWR	Total
Non-Forest				
Rockland	3058	445	270	3773
Brush	0	3	0	3
Grass	41	22	0	63
Water	241	936	25	1202
Highway	7240	929	2111	10269
Utility	159	11	201	371
Agriculture	24	356	1	38
Non-Forest Unclassified	130	1416	21	1567
Subtotal	10893	4118	2618	17629
Non-suitable Woodland				
· Fragile non-suitable	21487	6119	3700	31306
Suitable Woodland				
· Low Site	0	818	0	818
· Non Comm Species	0	37	0	37
· Non-suitable CFL (Reforestation Problem)	1806	117	2096	4019
Subtotal	1806	972	2096	4874
Suitable Commercial Forest Land				
· Non-problem	9076	718	5780	15574
· Fragile suitable	13447	823	4224	18494
· Cat. I - reforestation problem	50751	12856	25265	88872
· Cat. II - reforestation problem	694	0	0	694
· Combination reforestation problem and fragile	109835	24192	15280	149307
Subtotal	183803	38589	50549	272941
TOTAL	**217989**	**49798**	**58963**	**326750**

[1]Note: Acres based on GIS

Terms used in this table:

Woodland: Forest land not included in the suitable commercial forest land base, which includes all non-commercial and non-suitable forest land.

Non-suitable woodland: All fragile non-suitable forest land.

Fragile non-suitable: A TPCC classification indicating forest land that has inherent fragile conditions.

Suitable woodland: Forest land occupied by minor conifer and hardwood species not considered in the commercial forest land ASQ determination and referred to as non-commercial species (these species may be considered commercial for fuelwood, etc., under woodland management). Also included are low site and non-suitable commercial forest land. These lands must be biologically and environmentally capable of supporting a sustained yield of forest products.

Low Site: Sites that produce less than 20 cubic feet per acre per year of commercial tree species.

Non-commercial species: Forest tree species that are typically used as non-saw timber products.

Non-suitable commercial forest land: Sites that would take longer than the required number of years to meet or exceed minimum stocking levels of commercial species.

Commercial: Forest land that is now producing or is capable of producing at least 20 cubic feet of wood per acre per year of commercial tree species.

Suitable commercial: Commercial forest land that is determined to be capable of sustained Long-term timber production.

Non-problem: Commercial forest land that can be stocked to meet or exceed target stocking levels of commercial species within five years of harvest using standard practices, and which is classified non-fragile.

Fragile suitable: Sites where forest yield productivity may be reduced due to soil erosion, mass wasting, reduction of nutrient levels, reduction of moisture supplying capacity, and/or rise in groundwater table.

Category I Reforestation Problem: Sites that can be reforested within five years of harvesting using artificial regeneration and operational reforestation practices, or natural regeneration.

Category II Reforestation Problem: Sites that can be reforested within 6 to 15 years of harvest using natural and/or artificial regeneration in all forest types.

Combination reforestation problem and fragile: Commercial forest land that is classified as fragile suitable where operational reforestation practices, in addition to standard practices, are necessary to meet or exceed minimum stocking levels of commercial species within five years of harvest for Category I lands. The regeneration period for Category II lands is 6 to 15 years.

Table 14. District TPCC Summary of 1977

			Acres[1]
A.	Commercial Forest Land		
	1. High Intensity Management		
	NP	- No Problem	89,115
	FR	- Fragile Restricted	5,686
	F(x)R	- Fragile Restricted (combination)	50,064
	F(x)R - R(x)R	- Fragile Restricted - Reforestation Restriction (Combination)	103,860
	R(x)R	- Reforestation Restricted - Combination	29,199
	RR	- Reforestation Problem	8,936
		Subtotal	**286,860**
	2. Limited Management		
	F(x)W	- Fragile Withdrawn	368
	F(x)W - R(x)W	- Fragile and Reforestation Combination Withdrawn	20,400
	R(x)W	- Reforestation Withdrawn	1,380
		Subtotal	**22,148**
B.	Non-Commercial and Non-Forest Land		
	NF	- Roads	5,908
		- Rivers and Lakes	557
		- Rock Outcrops	4,581
	LS	- Low Site	4,128
	NT	- Non-Commercial Species	687
		Subtotal	**15,861**
C.	Statutory Withdrawals		1,503
		Total	**326,372**

[1]Note:Acres used were based on the Master Title Plat (MTP).

- Fertilizer would be applied on all present and future stands where research indicates increased wood yields will result.
- All commercial coniferous forest sites presently occupied mostly by grass, hardwoods and brush would be converted to conifers.

Table 15 shows the acreage of each silvicultural practice that is implied in the calculation of the preceding sustained yield level.

Economic efficiency analyses have been done for the following intensive management practices: precommercial thinning, commercial thinning, fertilization, and brush and hardwood conversion.

The measure of economic efficiency is change in net present value (NPV). NPV is the sum of values of revenues less costs during the life of the stand, all values being discounted to the time of harvest of the previous stand. If the change in NPV from adding an intensive management practice is positive, it is considered economically efficient; that is, it adds more value than it costs.

All analysis, including discount rates, was based on values net of inflation. This is called using real prices instead of nominal prices. The basis of expected timber stumpage prices is the average BLM timber sale price for the 1984-1988 period. For the primary analyses, future real wood price increases were estimated at 1.2 percent annually, based on the U.S. Forest Service's 1989 Resources

Table 15. Average Acreage Treated to Support Highest ASQ by Decade

Practice	Acres by Decade			
	1	2	5	10
Harvest				
Clear Cut	52,079	52,511	39,685	48,311
Commercial Thin	12,547	0	0	0
Partial Cut	0	0	0	0
Site Preparation	51,580	51,985	39,288	47,827
Planting				
Normal Stock	21,379	15,626	5,594	2,883
Genetic Stock	30,700	36,885	34,012	45,331
Plantation Maintenance/Release	48,550	48,835	36,907	44,929
Animal Damage Control	36,455	36,758	27,780	33,818
Precommercial Thinning	9,557	9,744	12,143	14,780
Fertilization	103,015	79,248	95,571	108,680
Stand Conversion[1]	5,672	4,752	0	0

[1]These acres are included in the harvest clearcut acreage above.

Planning Act assessment. A discount rate of four percent was used because it was considered to best represent the long-term outlook. Analyses of precommercial thinning, commercial thinning and fertilization for each site index were made of both understocked and well-stocked stands, assuming final harvest ages of 50, 60, 70 and 80 years. In general, fertilization or a combination of fertilization and commercial thinning result in a positive NPV for stands harvested at age 60.

For comparison and sensitivity testing, identical analyses were made using the following alternative assumptions: (1) zero real wood price increase and four percent discount rate, (2) 1.2 percent real wood price increase and seven percent discount rate, and (3) zero real wood price increase and seven percent discount rate. Under the first assumption, commercial thinning results in a positive NPV in all tests and fertilization results in a positive NPV in about one-half of the analyses. Precommercial thinning analyses indicates a negative NPV in most analyses. Under the second assumption, commercial thinning again results in a positive NPV for all analysis and fertilization and precommercial thinning indicate a negative NPV for all analyses. Under the third assumption, the results were similar to those for the second assumption.

Analysis of hardwood, brush or grass site conversion to conifers focused on estimating the maximum amount which could be spent on the practice while achieving a positive NPV. Generalized conclusions about economic efficiency of this practice were not reached, as the cost of conversion varies widely from site to site. Among the relevant factors in site-specific analysis would be the stumpage value of any trees on a site. At 1.2 percent real wood price increase, with a four percent discount rate, up to $1,406 per acre could be spent if harvest at age 60 was expected. The maximum amount economically feasible for any site declines as harvest age lengthens. Under other economic assumptions tested it is also lower.

Table 16 identifies a number of sensitivity analyses BLM had planned to make, to determine the effect on sustained yield levels of various management constraints, possible legal constraints, or options. Only a few of these analyses have been completed and the remaining ones would be quite time consuming. Further, we believe their results calculated for comparison with the highest potential previously identified would not necessarily resemble the results of a similar calculation for the preferred alternative, which will be developed later in the process. Although these analyses will not be done at this time, they still will be displayed for the preferred alternative in the Draft RMP/EIS.

Demand for BLM timber is based primarily on a combination of three factors: the characteristics of mills in the market area and their current short-term stocks of logs and purchased unharvested timber; western U.S. housing (including remodeling) activity; and the level of exports of non-federal logs. Timber supply studies will address the possibility of a timber "supply gap" in the primary timber market area for the District. A supply gap period is generally defined as a decade when expected harvest levels from all lands fall below recent historic levels. Studies and data on this period, for this market area, are intended to be available for the RMP/EIS.

Table 16. Summary of Sensitivity Analyses.

	Sustained Yield (Non-declining Harvest Level) First Decade	
Sensitivity Analysis	**MMCF**	**MMBF**
All Feasible Practices, Highest Sustainable Yield	46.7	296.9
No Harvest Below Age of Culmination of Mean Annual Increment (CMAI)[1]	34.5	218.5
No Harvest of Stands Smaller Than 12" Average Diameter	45.0	286.2
No Harvest of Stands Smaller Than 16" Average Diameter	29.8	188.8
No Harvest of Stands Smaller Than 20" Average Diameter	16.0	101.6
No Harvest of Stands Smaller Than 24" Average Diameter	10.4	65.3
No Planting of Genetically Improved Stock	44.8	284.6
No Fertilization	40.9	259.7
No Precommercial Thinning	46.9	298.6 [2]
No Commercial Thinning	46.4	297.0
No Conversion to Conifers of Sites Occupied by Hardwoods, Brush and Grass	45.1	287.0
No Fertilization, Thinning or Site Conversion	38.8	249.0
No Prescribed Burning	*	*
No Use of Herbicides	*	*
No Fertilization, Thinning, Site Conversion, Prescribed Burning or Herbicides	*	*
No Harvest of Lands Considered Uneconomic to Harvest/Manage	3	3
No Use of Marginal Intensive Management Practices	3	3
Departure from Non-declining Harvest Level, No Harvest Below Age of CMAI		

[1] CMAI is the peak of average yearly growth in volume of a forest stand (total volume divided by age of stand).
[2] The ASQ for no precommercial thinning is slightly higher than the highest sustainable yield because the precommercially thinned stands have fewer stems per acre, and the initial reduction in total volume is not offset by larger diameter stems until about stand age 60. With no minimum harvest age, most stands would be harvested at age 40 or 50.
[3] Not applicable to Coos Bay

* Data to be available in the RMP/EIS.

MMCF = Million Cubic Feet
MMBF = Million Board Feet

Fuelwood sold by BLM in the planning area has averaged 1,675 cords annually for the last five years. Opportunities for increasing the availability of fuelwood for local use include managing designated areas for fuelwood harvest.

Opportunities that can be considered to maintain or improve the timber resource program include:

- Utilize all intensive management practices that are economically efficient (provide a positive net present value).
- Exchange scattered parcels of BLM land for parcels which would "block up" ownership and reduce operating costs.
- Avoid exchanging suitable commercial forest lands for lands that would be managed for primarily non-timber resources.
- Realign the Coos Bay/Medford and Coos Bay/ Roseburg District boundaries and Sustained Yield Boundaries to administratively transfer jurisdiction of land to the district managing the land.

Animals

Each of the five seral stages (see Vegetation) provides important habitat for some wildlife species. The most important wildlife habitats on BLM-administered lands in the planning area are old-growth forest stands, streams, riparian zones, and a variety of special habitat features. Stream mileage figures and identified riparian zone acreage figures are shown in Table 6 in the Water Resources discussion. Old growth (trees more than 200 years old) acreage figures are shown in Table 8 in the Vegetation discussion.

The northern spotted owl is listed as a threatened species by the U.S. Fish and Wildlife Service and the state of Oregon. Most recent inventories and monitoring (1990) covering about 90 percent of the district, have identified the following known spotted owl occupancy of BLM-administered lands:

55 pair occupancy
21 single occupancy
13 singles presence

Most of these owls roost in mature and old growth stands and forage in stands of various ages.

During 1990, 32 of the 55 known pairs successfully reproduced, with an average of 1.4 juveniles per pair. In the previous four years the number of known nesting sites ranged from six to 11 with 1.3 to 1.7 juveniles produced per successful nest.

Other federally listed threatened, endangered, candidate or proposed, or state listed animal species inhabiting BLM-administered land in the planning area are:

- Bald eagle (federally listed as threatened in Oregon; listed as threatened by the State of Oregon): There are three known nesting pairs of bald eagles on BLM-administered lands in the planning area.

- Peregrine falcon (federally listed as endangered): Two known aeries (nest sites) are located within the district, however, these sites are not on BLM-administered land. Regular fall through spring sightings are thought to be primarily migrant birds.

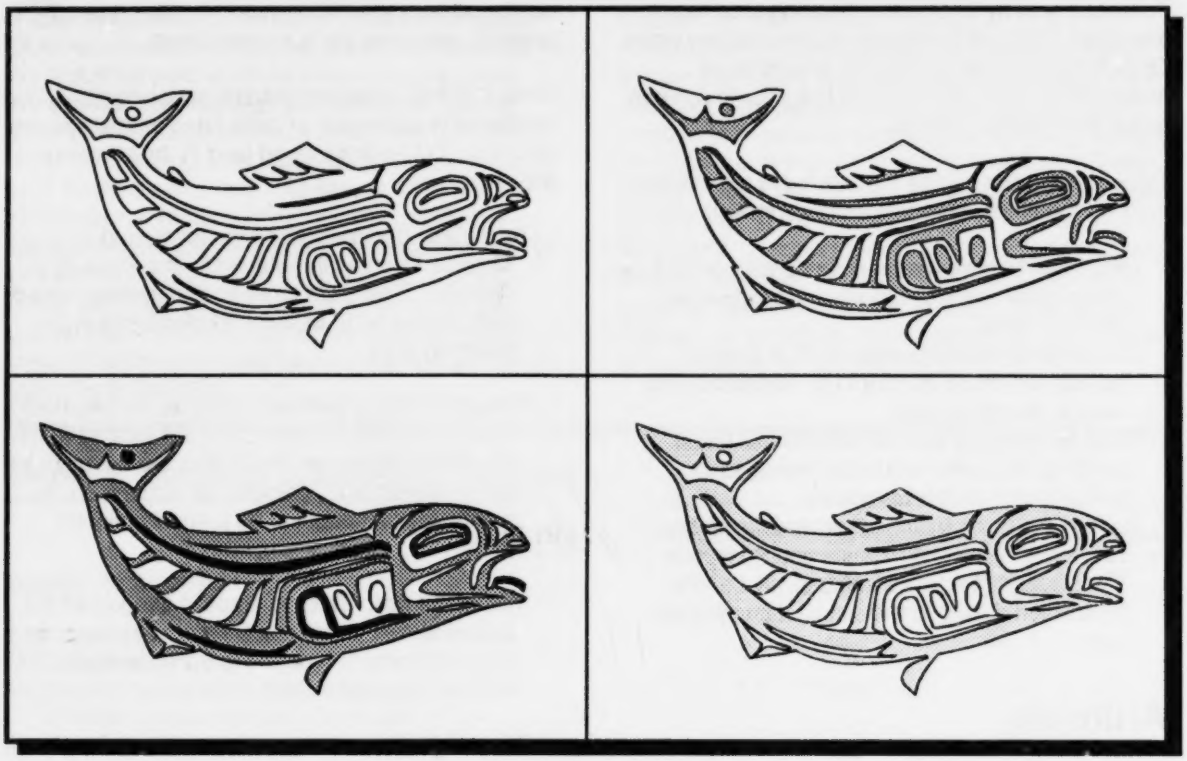
- Two of the major nesting areas in Oregon for the snowy plover, a federal candidate species, occur on or adjacent to federal lands on the North Spit of Coos Bay and at New River.

- The Aleutian Canada goose, a federally listed endangered species, uses the New River area during its annual migration. New River appears to be the major staging area in the state for this species.

- Several suspected nesting areas for the marbled murrelet, a federal candidate species, have been identified in the district.

The Roosevelt elk density on BLM-administered lands in the planning area is estimated by ODFW to be from two to ten per square mile. The quality and quantity of habitat appears to have decreased in recent years, due to timber management practices. The highest numbers of elk occur in the Tioga and Umpqua Resource Areas. Spring populations of black-tailed deer in the planning area are estimated by ODFW to occur at densities of 10 to 20 deer per square mile in the Coast Range.

Dominant woodpeckers (downy, hairy and pileated woodpeckers, northern flicker and the red-breasted sapsucker) are cavity dwellers of high public interest. Based on forest stand condition information, an estimate is being prepared for the RMP/EIS of the number of acres of suitable habitat (stands 80 years or older which contain appropriate snags for foraging, roosting or reproduction) for these species on BLM-administered lands in the planning area, which supports a population estimated at 40 percent of potential.



Anadromous fish (coho and chinook salmon, and steelhead) spawn in almost all of the major streams in the planning area. An estimated 250 miles of streams on BLM-administered land support coho runs, 92 miles support chinook runs, and 263 miles support steelhead runs. About 392 miles of streams support cutthroat trout. Cutthroat also inhabit several small lakes on BLM-administered lands in the planning area. ODFW releases hatchery steelhead to supplement wild populations.

Wildlife populations can be affected by management activities that alter habitat, particularly by timber harvesting, site preparation activities and road construction. To mitigate impacts on wildlife, the district has imposed the following requirements on other resource management activities:

- A total of 535 acres are designated for bald eagle management and protected from timber harvest.
- In accordance with a 1987 interim agreement with the Oregon Department of Fish and Wildlife, until completion of the new RMP, 19 spotted owl habitat sites are protected from activities which would render the sites unsuitable for continued occupancy. In addition, two owl sites were protected by a rider on the 1990 appropriation bill, and BLM has expanded interim management for spotted owls for fiscal years 1991-1992 by not planning any regular green timber sales in any of the habitat conservation areas recommended by the Interagency Scientific Committee.
- Timber management guidelines include provisions for limiting the size of clearcuts to 40 acres and spacing the harvest units to aid in providing desirable size and arrangement of forage areas for Roosevelt elk and black tailed deer.
- Twenty-three miles of roads have been closed to general public use, to enhance elk habitat.
- An average of one and one-half conifer wildlife trees per acre are left when lands in the intensive timber management base are harvested to provide habitat for cavity nester species.
- Riparian zones are protected as summarized under Water Resources, to protect habitat important to many species.

The following projects have been undertaken under current plans, to improve wildlife habitat:

- Forage seeding of grass and legumes in selected clear cut units, to improve habitat for elk.
- Fish habitat improvement projects, including barrier removal and construction of instream structures.

Major additional opportunities that can be considered to maintain or improve important habitats include the following:

- Adopting the Interagency Scientific Committee Conservation strategy for the northern spotted owl which recommends a well disbursed system of conservation areas of large blocks of habitat closely spaced with dispersal habitat in between.
- Manage acreage of potential bald eagle habitat to help meet or exceed goals of the Pacific Bald Eagle Recovery Plan, including retention of large conifer trees (acreage estimate to be available in the RMP/EIS).
- Maintain osprey nest trees and perch trees by managing a five- to ten-acre area around each nest tree.
- Manage BLM-administered forest lands in elk habitat to maintain a cover/forage ratio of 60/40 percent and manage cover to obtain a cover composition ratio (hiding, thermal, optimal thermal) of 20/40/40 percent.
- Manage vehicle access to maintain a road density open to vehicular traffic of one and one-half road miles per square mile, in elk habitat areas.
- Seed 50 percent of total area harvested in elk habitat to legume and/or grasses for elk forage.
- Expand coho and steelhead habitat by providing passage over identified barriers.
- Implement land exchanges to acquire important elk habitat, spotted owl habitat and frontage on key coho and steelhead streams.

Livestock Grazing

There are seven leases on the district providing 270 Animal Unit Months (AUMs) of use on 439 acres of BLM-administered land. Under current management direction, leases are to be issued, based on public demand, when grazing does not interfere with timber production, watershed protection, water quality or recreation, and to control tansy ragwort.

Opportunities may exist to include an aggressive program to eradicate invading vegetation in the pasturelands at Dean Creek and to increase grazing in the New River area to maintain favorable Aleutian Canada Goose habitat.

Cultural and Paleontological Resources

Any identifiable location of past human activity is a cultural resource, including archeological or historical sites, structures or traditional use places. The last category includes places of traditional cultural or religious importance to Native American groups.

Federal agencies are responsible for cultural resources on lands under their jurisdiction and for effects of their actions on cultural resources on non-agency lands. Through a group of laws beginning with the Antiquities Act (1906), BLM has been mandated to protect and manage such resources on lands it administers.

The planning area was first occupied by nomadic native peoples at least 12,000 years ago. The first historic occupancy, by transient fur trappers, began in the 1820s, with settlement following in the 1830s.

A Class I (existing data) cultural resource survey was conducted for the district in 1979. Field surveys have been mainly linked to locations of surface-disturbing activities, particularly timber sales. Reconnaissance surveys have been conducted on about 10,000 acres of BLM-administered land.

Eighty prehistoric sites have been identified on BLM-administered lands. One site has been included on the National Register of Historic Places, with several additional sites considered eligible for inclusion.

Several hundred historic sites have been identified on BLM-administered lands and are documented in historical records and have been verified in the field. One site has been placed on the National Register and three others are deemed eligible for inclusion.

One site on BLM-administered lands in the planning area has been identified by Native American groups as locales of traditional or religious uses.

BLM conducts surveys for cultural resources prior to authorizing surface disturbing activities and prior to approval of land disposal. Identified cultural resources are evaluated and protected as appropriate to the importance of the resource. Consultation with the State Historic Preservation Officer occurs when cultural resources are identified.

Nineteen fossil locations have been documented on, or adjacent to, BLM-administered lands in the district. If ground-disturbing activities are planned on or near these sites, they are evaluated and the sites protected as appropriate.

Special Areas

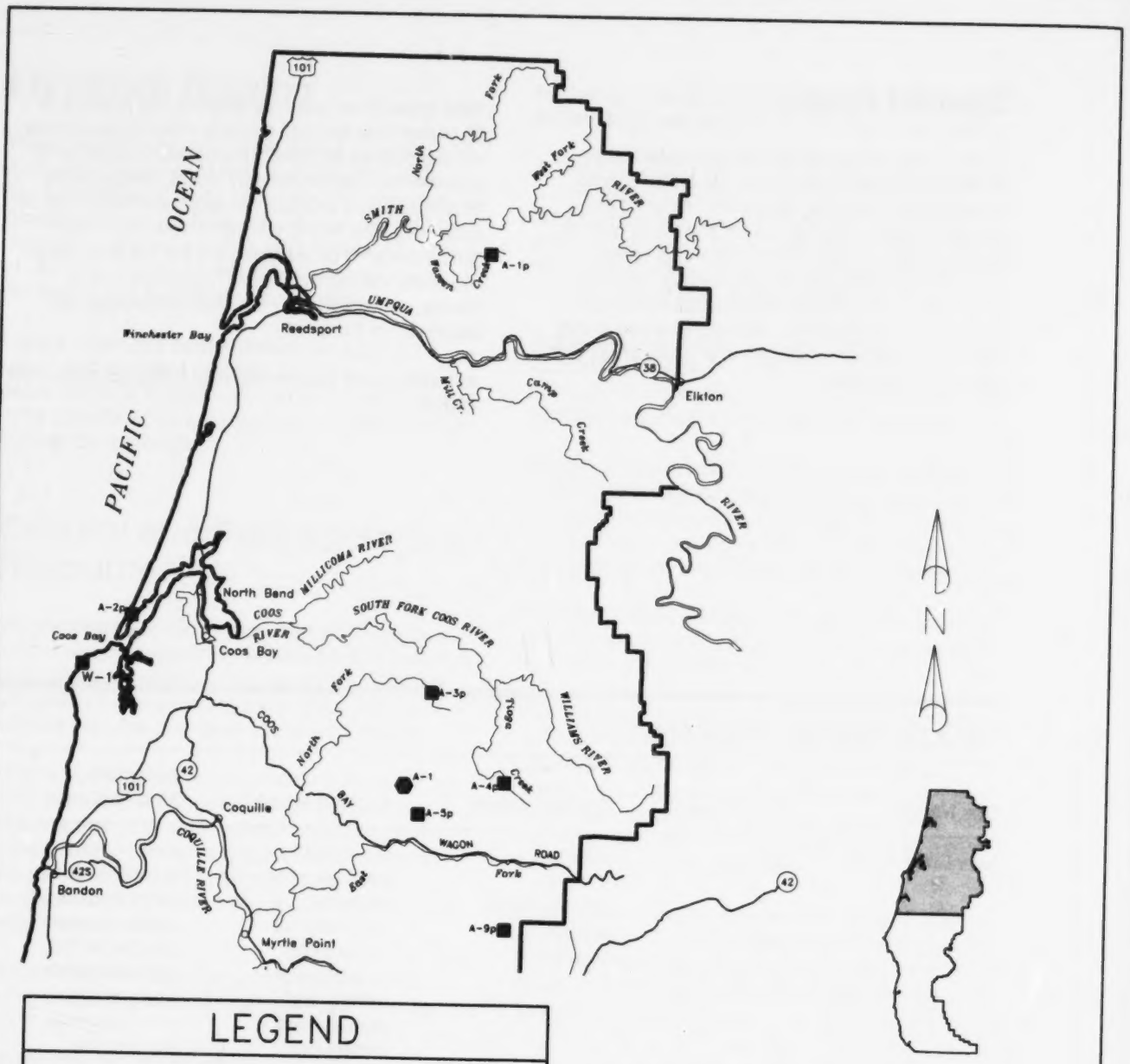
Table 17 lists areas on BLM-administered lands currently identified with specific labels for special management, including Areas of Critical Environmental Concern (ACECs, which are areas of BLM-administered land identified as needing special attention), and Research Natural Areas (RNAs, which are areas established and maintained for research and education). Also summarized in that table are potential modifications in those areas that have been identified.

Nine areas have been identified by the public and BLM staff members as possibly meeting the criteria for eligibility as ACECs. The identified areas were screened by interdisciplinary teams composed of BLM managers and staff, to determine whether their values met the ACEC criteria of "relevance" and "importance." For example, are the values involved of substantial significance? The results of that review, as approved by the district manager, are displayed in Table 18.

All existing and potential special areas are shown on Map 5.

Table 17. Existing Special Areas

Site Name	Size (acres)	Primary Values	Current Mgmt.	Potential Modification
New River ACEC	500	Wildlife, fisheries, botanical and cultural resources	Managed for protection from development, providing habitat for priority species of wildlife and plants, maintaining river flows and protecting cultural resources	Incorporate additional BLM lands and any lands acquired into the ACEC, withdraw lands from mineral entry, propose the area be designated as a National Conservation Area
Cherry Creek RNA	570	Fills three cells in the Oregon Natural Heritage Plan	Withdrawn from management activities for research, study and educational purposes	Expands boundary to encompass an entire watershed drainage area
Powers Environmental Education Area	70	Environmental Education Area	Withdrawn from management activities for educational purposes	Transfer to Powers School District under R&PP Act



LEGEND

- District Office
- Interstate Highway
- U.S. Highway
- State Highway
- District Boundary
- Highway
- Stream
- Urban Area
- City
- A-2 Existing Areas
- A-8p Proposed ACEC
- W-1 Wilderness

COOS BAY DISTRICT
1990 AMS SUMMARY

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MILES

MAP 5: SPECIAL AREAS

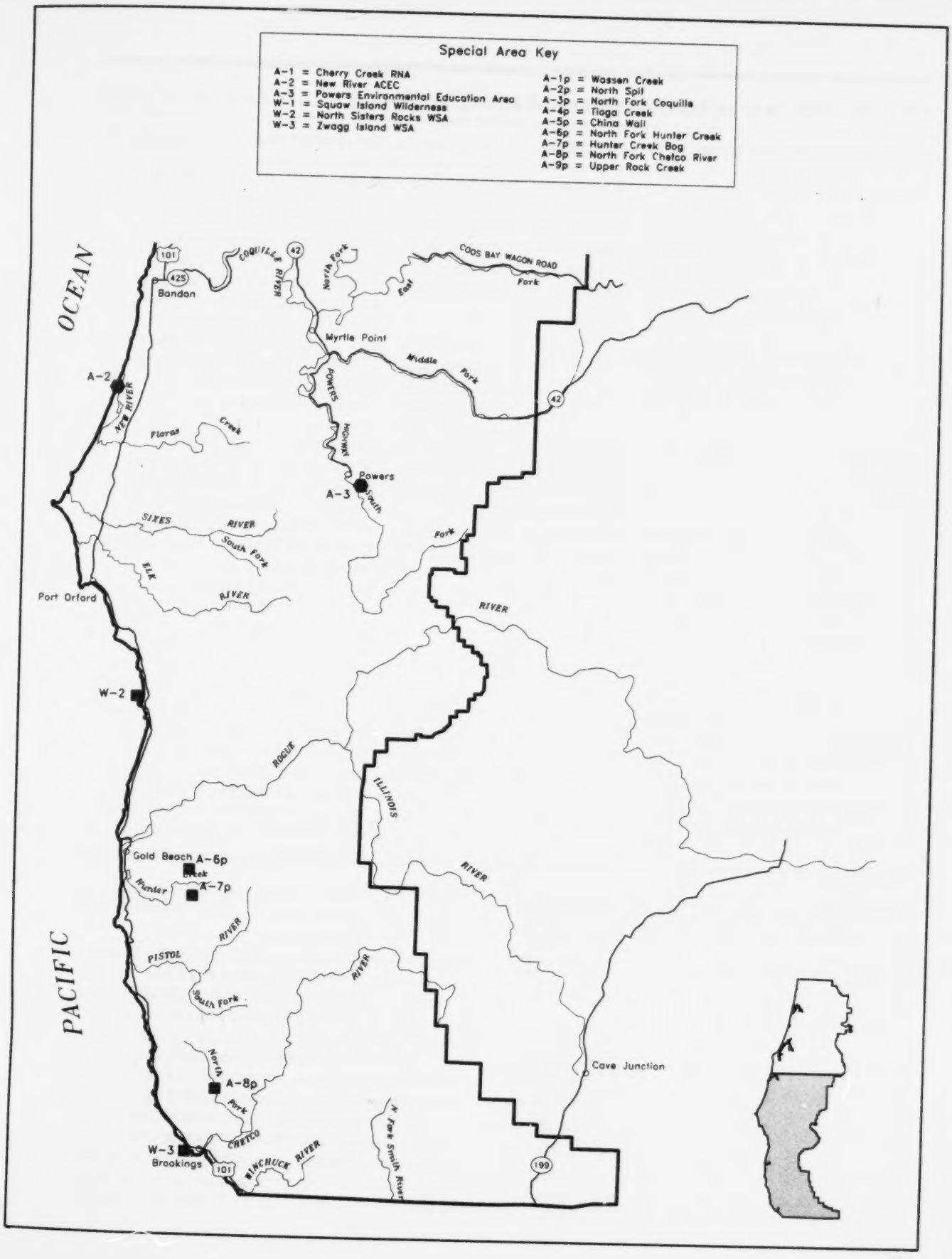

Special Area Key
A-1 = Cherry Creek RNA
A-2 = New River ACEC
A-3 = Powers Environmental Education Area
W-1 = Squaw Island Wilderness
W-2 = North Sisters Rocks WSA
W-3 = Zwagg Island WSA
A-1p = Wassen Creek
A-2p = North Spit
A-3p = North Fork Coquille
A-4p = Tioga Creek
A-5p = China Wall
A-6p = North Fork Hunter Creek
A-7p = Hunter Creek Bog
A-8p = North Fork Chetco River
A-9p = Upper Rock Creek
OCEAN
PACIFIC
Bandon
Myrtle Point
Powers
Port Orford
Gold Beach
Brookings
Cave Junction
A-2
A-3
A-6p
A-7p
A-8p
W-2
W-3
COQUILLE RIVER
North Fork
COOS BAY WAGON ROAD
Middle Fork
POWERS HIGHWAY
South Fork
NEW RIVER
Floras Creek
SIXES RIVER
South Fork
ELK RIVER
ROGUE RIVER
ILLINOIS RIVER
Hunter Creek
PISTOL RIVER
South Fork
North Fork
CHETCO
WINCHUCK RIVER
N. Fork Smith River
101
42
42S
199

Table 18. Results of ACEC Identification and Screening Process

Site Name	Size (acres)	Description	Screening Results/Rationale
Wassen Creek	3,420	Relatively undisturbed large block of mid-aged (100+) Douglas-fir forest	Meets criteria. Has potential to fill five cells in Oregon Natural Heritage Plan. The relatively large block of mid-age timber occurring on BLM and adjacent Siuslaw National Forest land provides study opportunities as well as providing habitat for Northern Spotted Owl. Wassen Creek also has potential for inclusion in the Wild and Scenic River System.
North Fork Coquille River	290	Relatively undisturbed old-growth Douglas-fir/hardwood riparian area, large scenic waterfall	Meets criteria. Area provides best coho salmon spawning habitat within Coquille River System. Provides excellent opportunity to study impacts of timber management on the fisheries. Provides habitat for a wide variety of terrestrial wildlife species as well as one of the highest waterfalls in the district. North Fork Coquille River also has potential for inclusion in the Wild and Scenic River System.
China Wall	210	Consists of a series of balds and meadows along the "china wall"	Meets criteria. Area contains a large shelter and ridge top trail system eligible for inclusion in the National Register of Historic Area also contains a seam of fossils and habitat for one special status plant species.
Tioga Creek	40	Undisturbed old-growth Douglas-fir riparian area	Meets criteria. Undisturbed old-growth riparian habitat found in this area is unique for district, and perhaps western Oregon BLM district lands. Area is a traditional high use area for elk and other big game species.
North Spit	530	The undeveloped south portion of the North Spit of Coos Bay	Meets criteria. Area has many competing demands for development or utilization, as well as possessing unique habitat for special status plant and animal species.

Table 18. Results of ACEC Identification and Screening Process (continued)

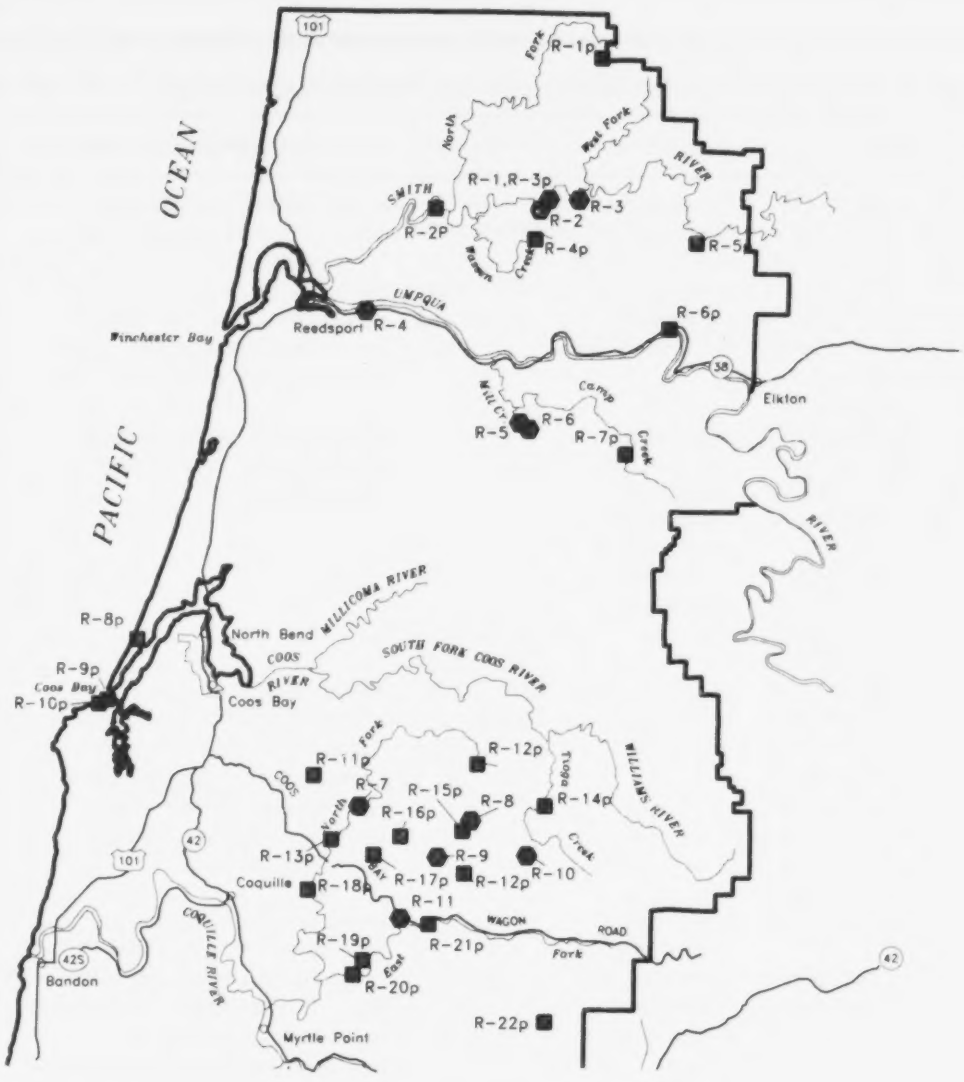
Site Name	Size (acres)	Description	Screening Results/Rationale
Upper Rock Creek	460	Reportedly one of largest remaining stands of old-growth red cedar in the Coast Range	Meets criteria. Undisturbed old-growth red cedar Douglas-fir provides habitat for both big game species and Northern Spotted Owl. Site has potential for filling one Oregon Natural Heritage Plan cell.
North Fork Hunter Cr.	1,730	Vegetative communities atypical of the general area because of underlying geologic formations	Meets criteria. Area contains several special status plants and cultural sites.
Hunter Creek Bog	560	Area comprised of a serpentine bog	Meets criteria. Area has potential to fill two Oregon Natural Heritage Plan cells. Contains several special status plant species. Area is also highly mineralized resulting in conflicting demands.
North Fork Chetco River	600	A relatively undisturbed, predominately hardwood riparian area	Meets criteria. Area has the potential for filling two cells in the Oregon Natural Heritage Plan. The area also contains one significant cultural site, and has been nominated for inclusion in the Wild and Scenic River System

Recreation

There are an estimated 1.7 million annual recreation visits to BLM-administered lands in the planning area. There are ten developed recreation sites on BLM-administered lands (see Map 6). Hunting, fishing, hiking, horseback riding, general sightseeing and driving recreation vehicles account for the majority of the other use. There are approximately 1,570 miles of BLM-controlled access road open to motorized travel. Most vehicle use is limited to existing roads, as unroaded terrain and vegetation discourage driving off-road. Approximately 264,800 acres are designated as open to off-road vehicle use. About 6,430 acres are closed while 57,940 acres are designated for use limited to roads and trails or to certain seasons, to protect sensitive resources.

Recreation use is concentrated in the following 20 locations:

- Dean Creek
- Smith River
- Umpqua River
- Camp Creek
- Mill Creek
- Wassen Creek
- Loon Lake
- North Spit
- Coos Head
- Coos River



LEGEND

- District Office
- Interstate Highway
- U.S. Highway
- State Highway
- District Boundary
- Highway
- Stream
- Urban Area
- City
- R-3 Existing Recreation Site/Area
- R-8p Potential Recreation Site/Area

COOS BAY DISTRICT
1990 AMS SUMMARY

10 0 10 20
MILES

MAP 6: RECREATION SITES/AREAS

COMMENT RESPONSE FORM

COMMENTS ON THE ANALYSIS OF THE MANAGEMENT SITUATION FOR THE

_____ RESOURCE MANAGEMENT PLAN

(You may wish to comment on the accuracy of the information displayed or to suggest additional information that should be considered.)

SUGGESTIONS FOR THE PREFERRED ALTERNATIVE FOR THE _____
RESOURCE MANAGEMENT PLAN

(You may wish to suggest (1) one of the five alternatives outlined in Appendix 3, (2) a new alternative blending elements from more than one of those five, (3) and/or continuation of specific parts of current management direction, and/or (4) implementation of specific management opportunities.)

NAME_____

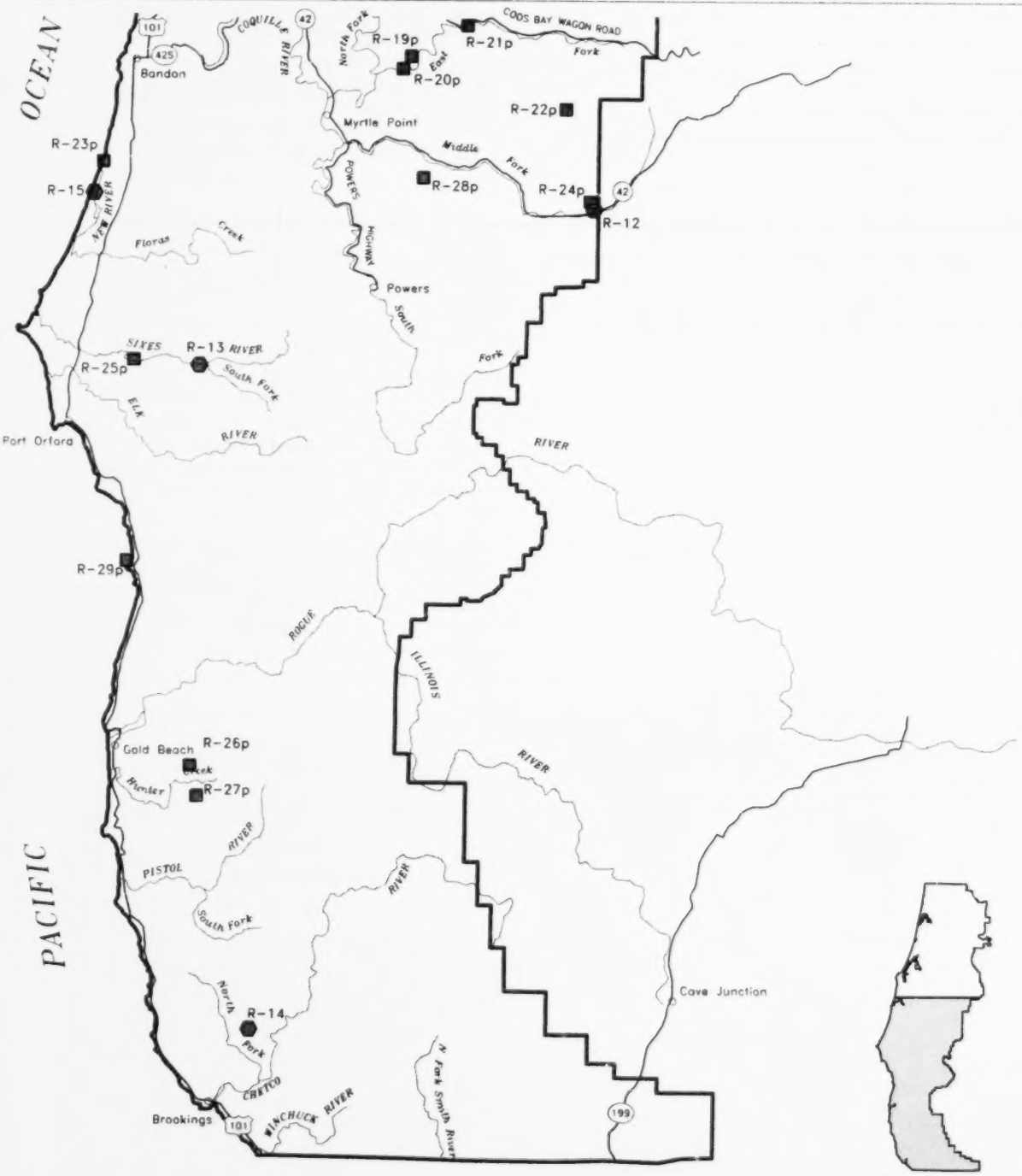
ADDRESS_____

PLACE
STAMP
HERE

U.S. Department of the Interior
Bureau of Land Management
Coos Bay District Office
1300 Airport Way
North Bend, Oregon 97459-2000

Recreation Site Key

R-1 = Smith River Falls
R-2 = Fawn Creek
R-3 = Vincent Creek
R-4 = Dean Creek Elk Viewing
R-5 = Loon Lake
R-6 = East Shore
R-7 = Laverne Park
R-8 = Park Creek
R-9 = Big Tree
R-10 = Burnt Mountain Cabin
R-11 = Frona Park
R-12 = Bear Creek
R-13 = Sixes River
R-14 = Palmer Butte
R-15 = New River SRMA
R-1p = Kentucky Creek / Roman Nose Trail
R-2p = Smith River Log Dump (Day Use)
R-3p = Smith River Boat Ramp
R-4p = Wassen Creek Trail
R-5p = Big Bend
R-6p = Sawyer Rapids Boat Ramp
R-7p = Camp Creek
R-8p = Coos Bay Shorelands
R-9p = Coos Head
R-10p = Coos Head
R-11p = Blue Ridge Rifle Range
R-12p = North Fork Coquille River Trail
R-13p = East Fairview Boat Ramp
R-14p = Tioga Basin
R-15p = Vaughn Creek Trail
R-16p = Middle Creek Falls
R-17p = McKinley Camp
R-18p = Rock Prairie Boat Ramp
R-19p = Yankee Run Boat Ramp
R-20p = Elk Creek Boat Ramp
R-21p = Gold Brick Boat Ramp
R-22p = Upper Rock Creek Trail
R-23p = Lower Four Mile Creek (Day Use)
R-24p = Bear Creek – Panther Ridge Trail
R-25p = Sixes River Boat Ramp
R-26p = North Fork Hunter Creek Trail
R-27p = Hunter Creek Bog Trail
R-28p = Camp Myrtlewood Trail
R-29p = South Sister Rock



- Tioga Creek
- North Fork Coquille River
- East Fork Coquille River
- Cherry Creek
- Sixes River
- New River
- Elk River
- Middle Fork Coquille River
- South Fork Coquille River
- Pistol River
- Rogue River
- Chetco River

All BLM-administered lands fall into two recreation management classes - Special Recreation Management Areas (SRMAs) and Extensive Recreation Management Areas (ERMAs). A small proportion of the lands in the planning area are managed as SRMAs (areas where a commitment has been made to provide specific recreation opportunities), which include sites with major investments in recreation facilities to meet management objectives. Such objectives include providing recreation opportunities that would not otherwise be available to the public; reducing conflict among users; minimizing damage to resources; and reducing visitor health and safety problems. Existing SRMAs are described in Table 19 and displayed on Map 6. All remaining lands are in the ERMA category.

Table 19. Special Recreation Management Areas

SRMA Name	Size (Acres)	Annual Visits	Other Relevant Data
Loon Lake Recreation Management Area	34	106,000	Located approximately 19 miles southeast of Reedsport. The Loon Lake Campground consists of 53 camp units and 34 picnic sites along with five restrooms and developed water system. The east Shore Campground consists of ten primitive camp units.
Dean Creek Elk Viewing Area	923	500,000	Located about three miles east of Reedsport. Development of parking areas and interpretive centers are currently underway. The area provides for public viewing of elk along Highway 38.
Coos Bay Shorelands	1,662	200,000	The Shorelands consist of two areas, the North Spit of Coos Bay and Coos Head. Both areas provide undeveloped opportunities for sightseeing, whale watching, photography, wildlife observations, fishing, clam digging, camping, horseback riding, ORV use and other dispersed activities
New River	537		Located about ten miles south of Bandon and ten miles north of Port Orford and within 1/2 mile of the Pacific Ocean. The area is undeveloped providing opportunities for fishing, waterfowl hunting, bird watching, beachcombing and other dispersed activities. New River once attracted an estimated 10,000 visits annually, before access to the public was eliminated.

BLM's pro-rata share of recreation demand increase anticipated for the planning area by the year 2000 (derived from the State Comprehensive Outdoor Recreation Plan) is compared in Table 20 to current estimated recreation activity on BLM-administered lands.

The following major opportunities have been identified for BLM to enhance recreation opportunities during the 1990s to help meet these demands:

- At Loon Lake Recreation Area, acquire adjacent Elliott State Forest lands to permit increasing the number of camp sites, expand existing beach/waterfront area and development of hiking/educational trails.

- At Dean Creek Elk Viewing Area, acquire adjacent lands east of the area to provide a more manageable unit, a more stable environment for the resident elk, expansion of existing environmental education/recreation opportunities and minimize conflicting land uses. Develop an environmental education program and provide for public health and safety.

- At the Coos Bay Shorelands, implement the opportunities contained in the Draft Management Plan.

- Improve the Smith River Falls, Vincent Creek, Park Creek, Big Tree, Sixes River and Bear Creek recreation sites to meet standards for handicapped access.

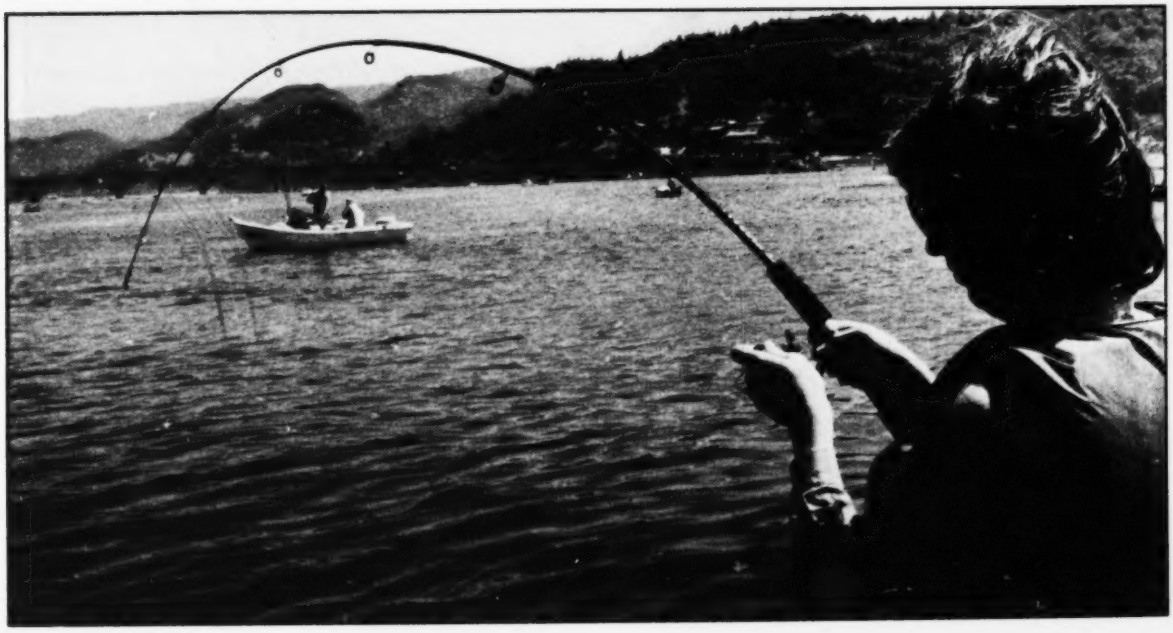
Table 20. Projected Increase in Demand for Recreation

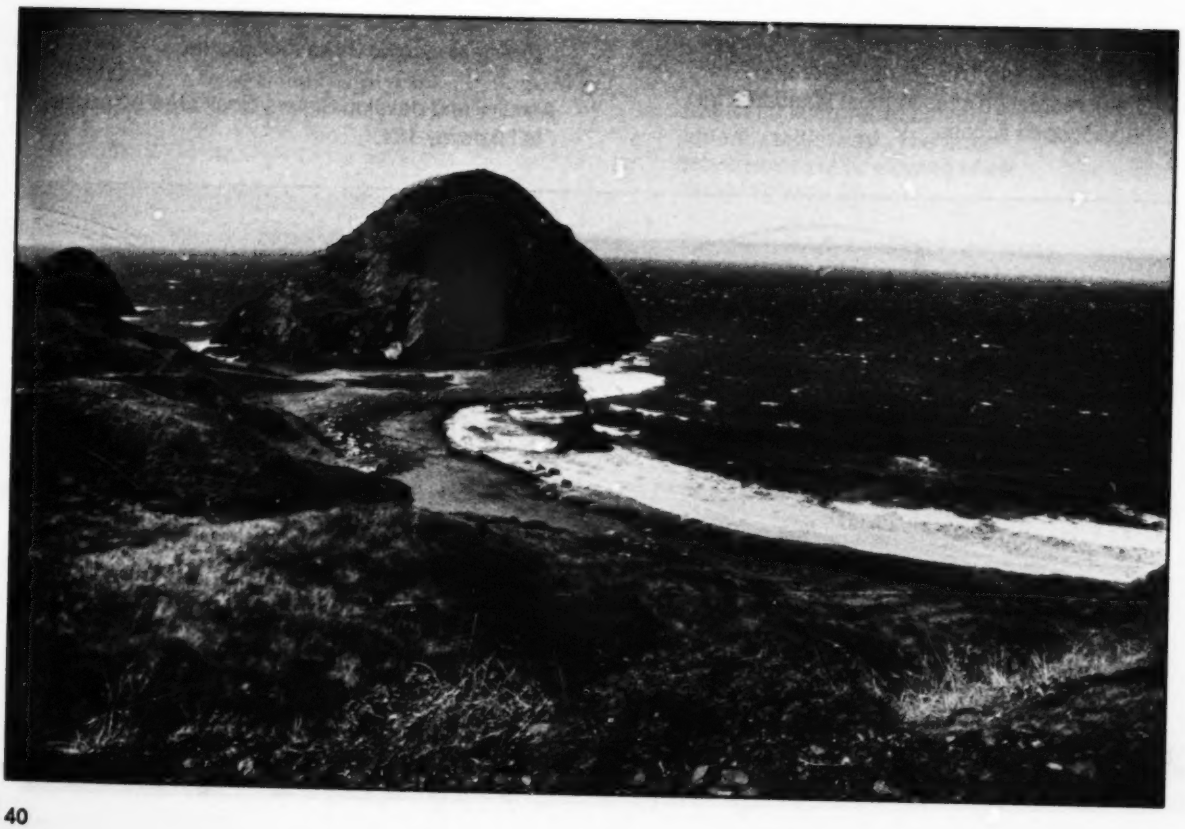
Activity	Estimated Current Visits	Projected Visits Year 2000
Off-road use	125,700	170,400
Motorized travel	345,800	493,900
Non-motorized travel	275,000	400,400
Camping	188,500	274,700
Hunting	77,100	87,500
Other land-based	315,700	478,700
Fishing	194,400	279,400
Boating	87,300	118,300
Other water-based	73,200	93,600
Winter sports	10,900	15,300
Total	**1,693,600**	**2,412,200**

- Develop boat ramps on the Smith, Umpqua, North Fok Coquille, East Fork Coquille, South Fork Coquille and Sixes Rivers and on the North Spit of Coos Bay.

- Nominate the Smith River Road, Coos Bay Wagon Road and North Fork Coquille River Road for inclusion in the National Back Country Byway or Scenic Byway Programs.

- Acquire and develop Sisters Rock area adjacent to Highway 101.





Visual Resources

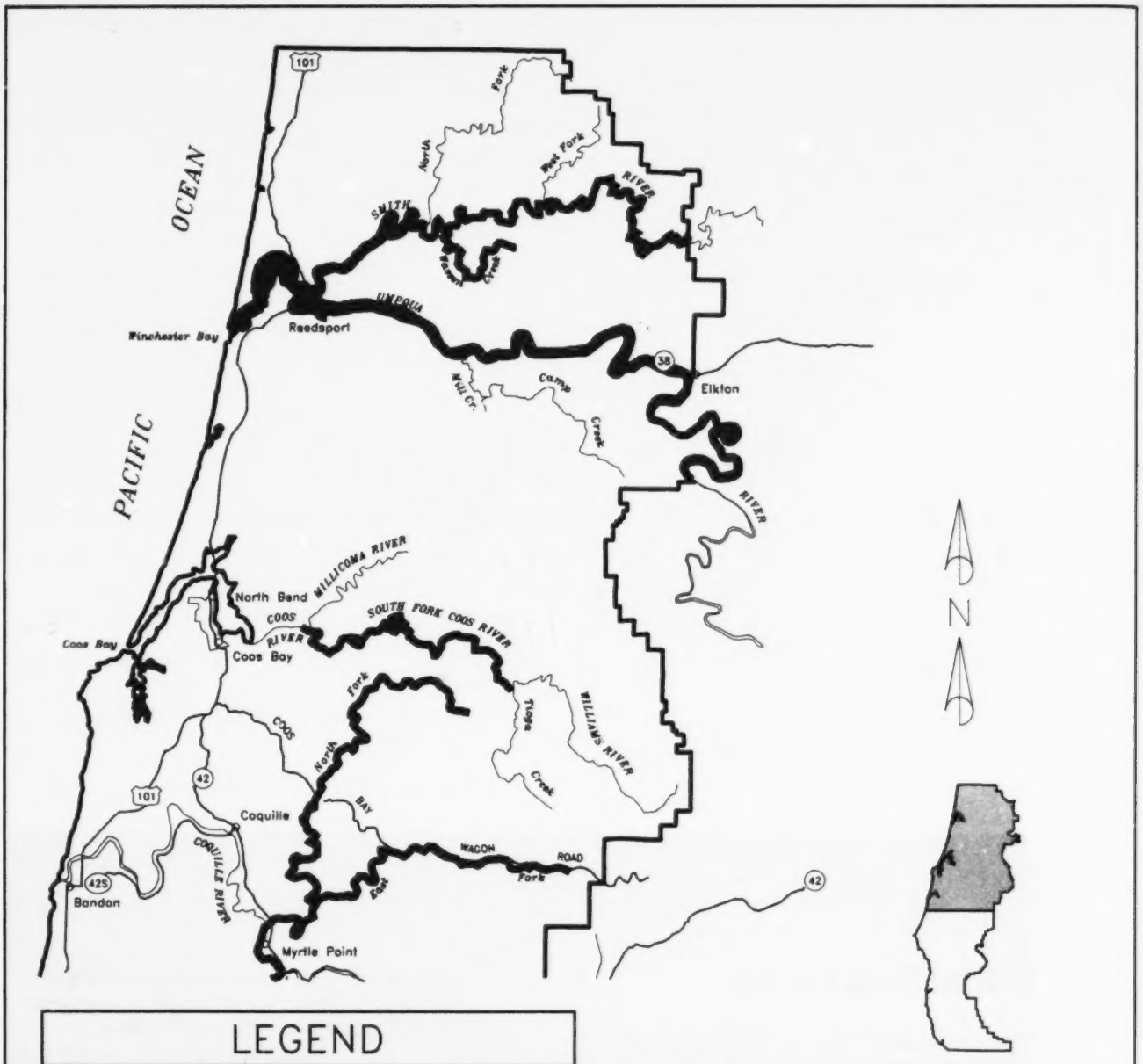
There are approximately 16,200 acres of BLM-administered lands in the planning area having high to moderate scenic qualities and high visual sensitivity levels (see Map 7).

Visual quality is affected by management activities, particularly timber harvest and road construction. To mitigate visual impacts, the district has imposed the following requirements on management activities:

- On 4,300 acres being managed to maintain high to moderate scenic qualities, management objectives are being met by limiting the size and designing the shape of clear cut units so they are not visually evident, and limiting harvesting to about 30 acres per year.
- On 1,000 acres being managed to maintain moderate to low scenic qualities with high to medium sensitivity levels, management objectives require designing any project to avoid that activity dominating the view of the area.

Major opportunities to further maintain or improve scenic quality include:

- Managing an additional 570 acres (Cherry Creek NRA) to maintain the highest scenic qualities until Congress makes a final determination on its inclusion in the Wilderness System.
- Managing an additional 7,600 acres of high to moderate scenic qualities and high sensitivity levels, to maintain their scenic qualities.
- Extending timber harvest rotations and limiting clearcut size to five acres or less in the foreground and 15 acres or less in the middle ground on 66,000 acres of moderate to low scenic qualities with high to moderate sensitivity levels.



LEGEND

- District Office
- Interstate Highway
- U.S. Highway
- State Highway
- District Boundary
- Highway
- Stream
- Urban Area
- City
- Potential Wild and Scenic River Section

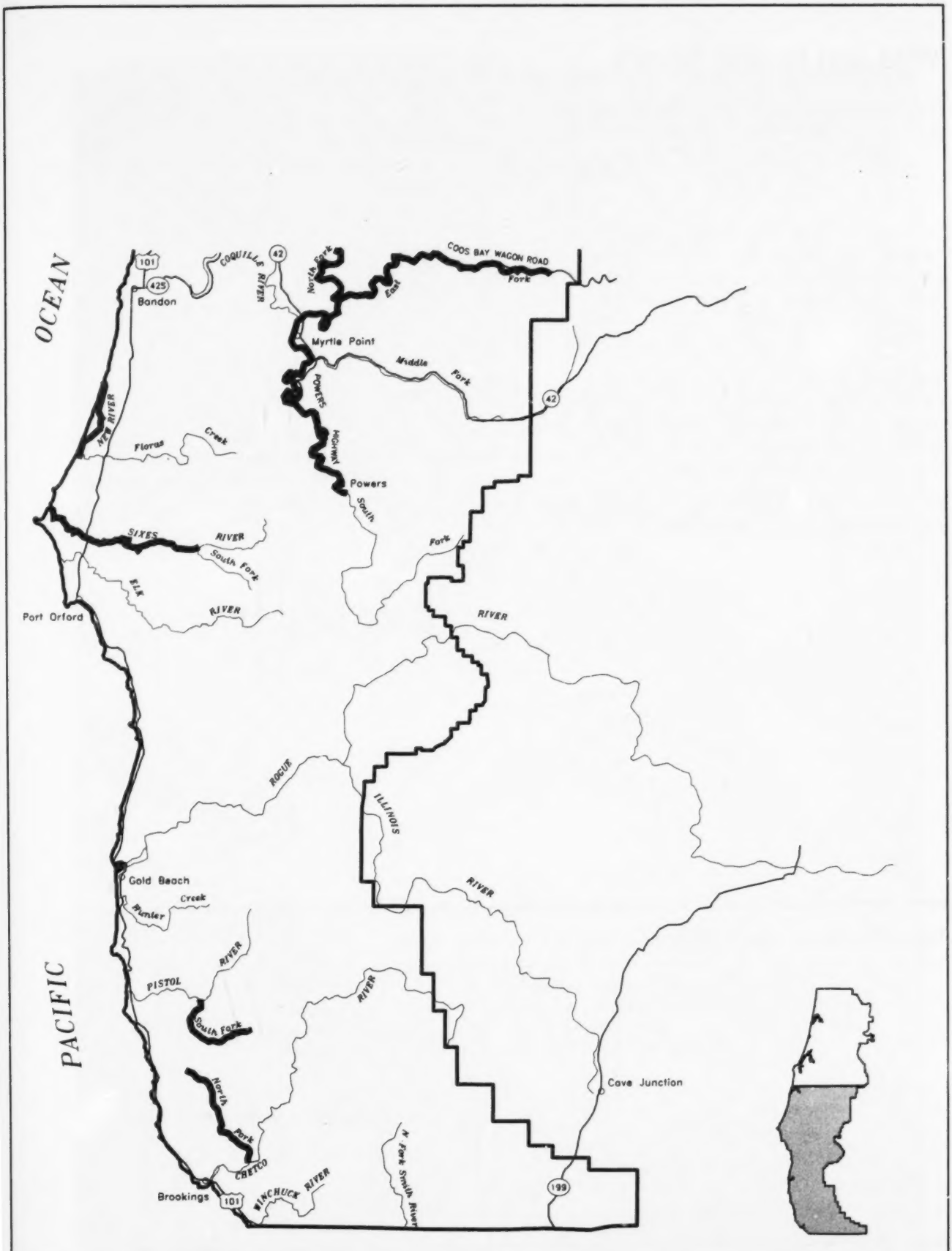
COOS BAY DISTRICT

1990 AMS SUMMARY

10 0 10 20

MILES

MAP 7: WILD, SCENIC, AND RECREATIONAL RIVERS


OCEAN
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101
425
42
Bandon
COQUILLE RIVER
North Fork
COOS BAY WAGON ROAD
East Fork
Myrtle Point
Middle Fork
42
POWERS HIGHWAY
Powers
South Fork
New River
Floras Creek
SIXES RIVER
South Fork
ELK RIVER
Port Orford
RIVER
ROGUE
ILLINOIS
RIVER
Gold Beach
Hunter Creek
PISTOL RIVER
South Fork
RIVER
North Fork
CHETCO
Brookings
101
WINCHUCK RIVER
N Fork Smith River
199
Cave Junction

Wild and Scenic Rivers

Table 21 shows river stretches, in the planning area, which have been designated by Congress under the Wild and Scenic Rivers Act. The district does not manage any land within the established or potential Wild, Scenic or Recreational corridors of these rivers.

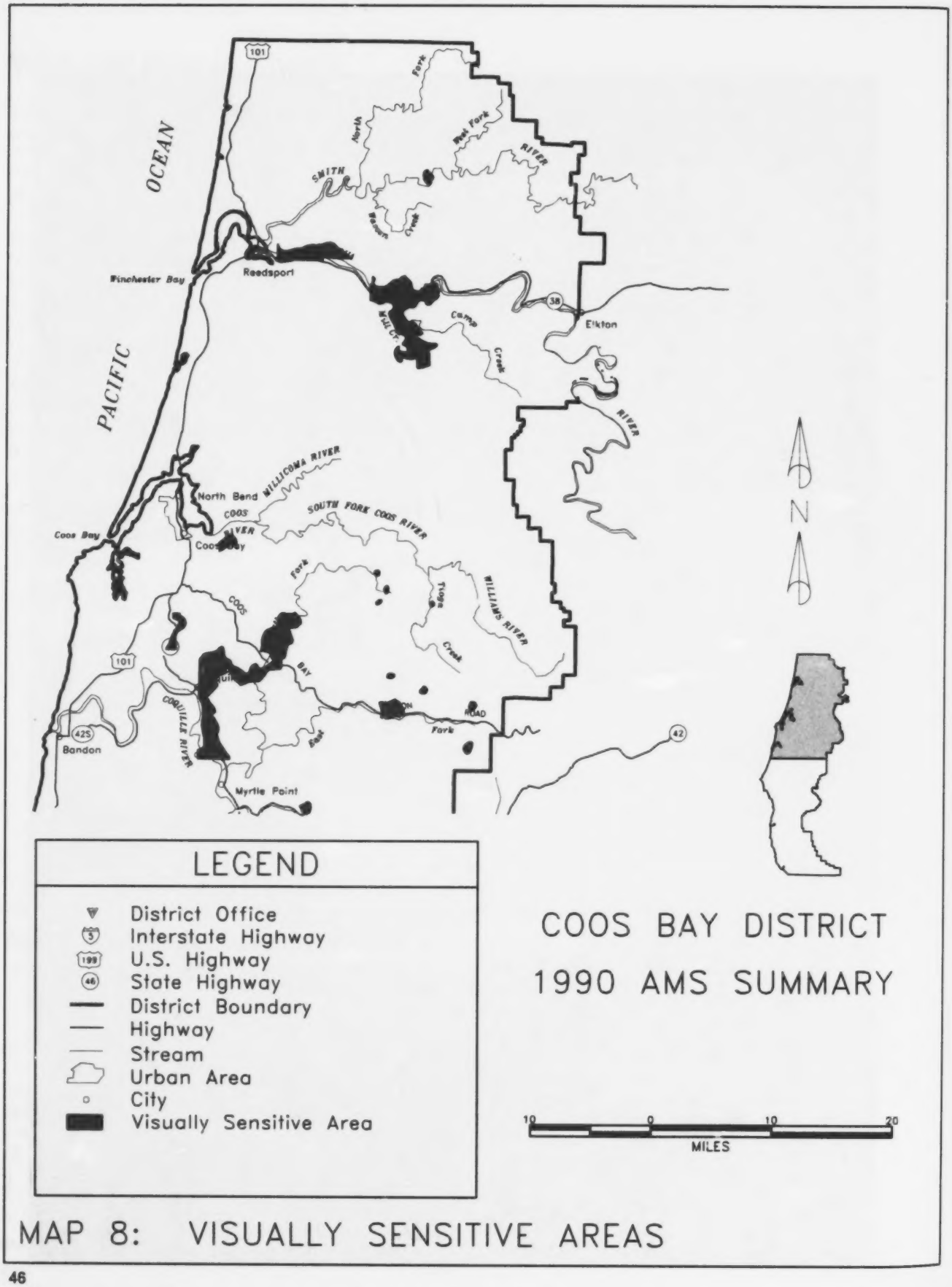
The Nationwide Rivers Inventory identified one river segment which crosses or is within a quarter mile of BLM-administered lands in the planning area. Additional sources of information indicate that 12 segments of other such rivers could have potential for national wild, scenic or recreational river designation. To each of these river segments, BLM has applied eligibility and classification criteria established in U.S. Department of the Interior - Department of Agriculture guidelines. The status of eligibility determinations and suitability studies for these rivers is shown in Table 22.

As shown, BLM has found 11 river segments to meet the eligibility (free flowing and at least one outstandingly remarkable value) criteria for designation and thus be eligible for suitability study. They are displayed on Map 8. Four of these river segments will be studied in the RMP process to determine their suitability for wild and scenic river designation. Eligible river segments located in areas where BLM-administered lands would not provide for substantial control of the river segment and protection of the identified outstandingly remarkable values are not considered appropriate for BLM-initiated study as part of the RMP process. The values on BLM-administered lands which help to make these excluded rivers eligible for study will be protected until a suitability study is completed by an appropriate agency.

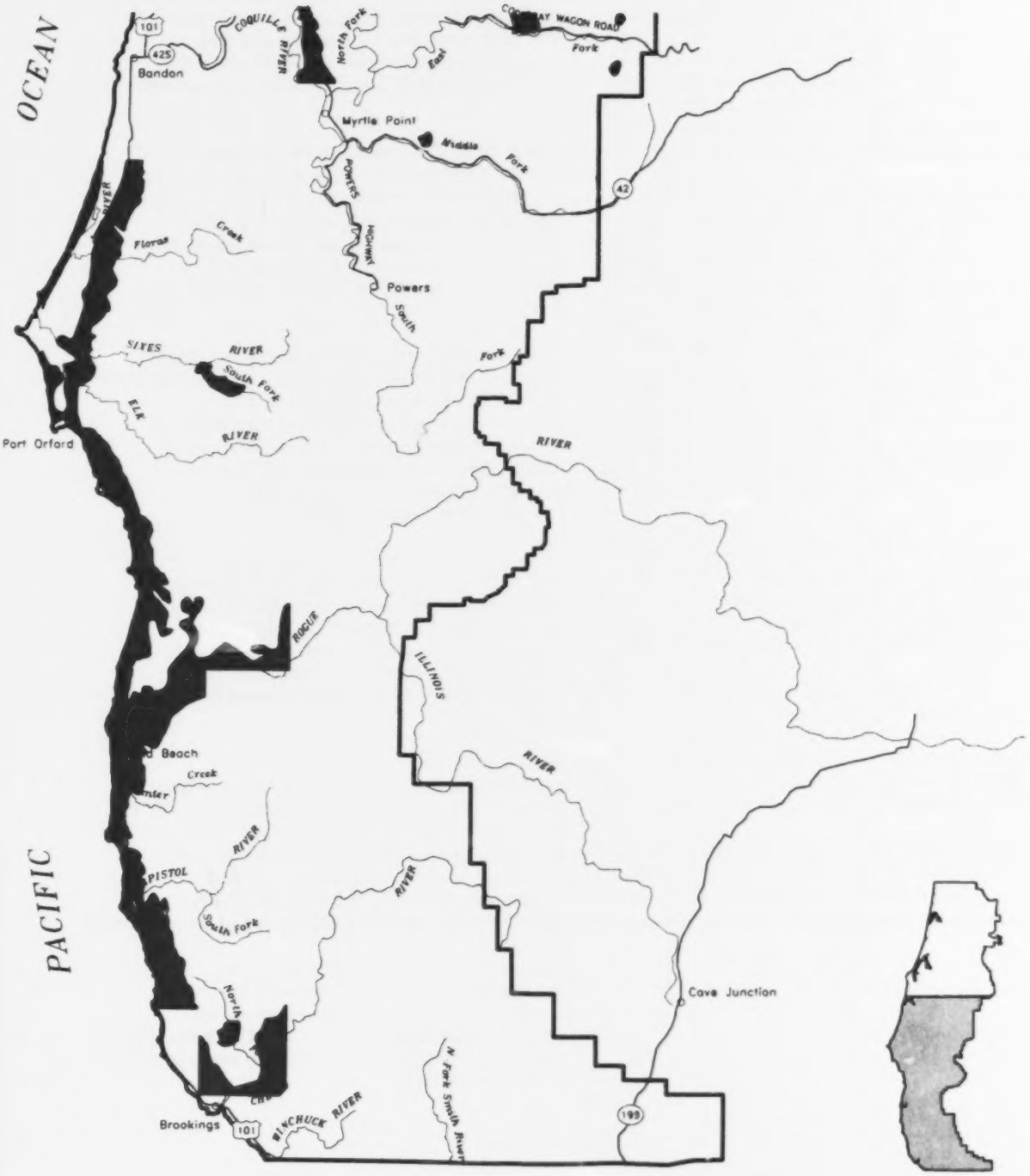
Those river segments found suitable in the final resource management plan will be further addressed in a subsequent legislative environmental impact statement. Based on that statement, the Department will recommend to Congress which segments should be designated through legislation.

Table 21. Designated Wild Scenic and Recreational Rivers

River Name	Total River Miles	River Miles designated Federal Wild & Scenic River System			River Miles Designated State Scenic Waterway		
		Wild	Scenic	Recreational	Natural	Scenic	Recreational
Rogue	48	12.75	7.5	17.0	12.75	7.5	17.0
Illinois	32	28.2	0	3.8	28.2	0	3.8
Chetco	55	25.5	8	11	0	0	0
Elk	30	0	0	17	0	0	17
N. Fork Elk	5	2	0	0	5	0	0
S. Fork Elk	5	0	0	0	5	0	0
N. Fk Smith	13	8.5	4.5	0	0	0	0



MAP 8: VISUALLY SENSITIVE AREAS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Bandon
COQUILLE RIVER
North Fork
East
Fork
Myrtle Point
Middle
Fork
42
POWERS
HIGHWAY
Powers
South
Fork
Floras
Creek
SIXES
RIVER
South Fork
ELK
RIVER
Port Orford
RIVER
ROGUE
ILLINOIS
RIVER
Beach
Creek
PISTOL
RIVER
South Fork
RIVER
North
Fork
Cave Junction
Brookings
101
CHETCO RIVER
N Fork Smith River
199

Table 22. Potential Wild and Scenic Rivers.

River Name	Total River Miles	BLM River Miles	Eligibility and Proposals for Study
Smith River	61	15.25	River is free flowing and considered in *Recreational Values on Oregon Rivers* to have outstandingly remarkable anadromous fisheries. The river meets the eligibility criteria and is recommended for joint suitability study with the Roseburg BLM District and Siuslaw National Forest
Wassen Creek	17	4.5	The creek is free flowing and in conjunction with the segment in the Siuslaw National Forest is considered to contain outstandingly remarkable scenic, recreational, wildlife and ecological values. Wassen Creek meets the eligibility criteria and is recommended for joint suitability study with the Siuslaw National Forest
Umpqua River	70.0	4.25	River is free flowing and considered to contain outstandingly remarkable scenic, recreational, geological, fish, historical, cultural and ecologic values. The river meets the eligibility criteria, however, the minimal BLM ownership along the river indicates the suitability study should be initiated by the State of Oregon or the Siuslaw National Forest.
South Fork Coos River	37	1.5	River is free flowing and considered in *Recreational Values on Oregon Rivers* to have outstandingly remarkable recreation and anadromous fish values. The river meets the eligibility criteria. Limited ownership of shoreline and adjacent land indicates that a suitability study should not be initiated by BLM
North Fork Coquille River	42	6	River is free flowing and considered in *Recreational Values on Oregon Rivers* to have outstandingly remarkable anadromous fish values. Two cultural sites along the river are considered to be outstandingly remarkable. The river meets the eligibility criteria. Limited ownership indicates that a suitability study should not be initiated by BLM
East Fork Coquille River	32.5	7.5	River is free flowing and considered in *Recreational Values on Oregon Rivers* to have outstandingly remarkable anadromous fish values. The river meets the eligibility criteria. Limited ownership indicates that a suitability study should not be initiated by BLM

Table 22. Potential Wild and Scenic Rivers (continued).

River Name	Total River Miles	BLM River Miles	Eligibility and Proposals for Study
South Fork Coquille River	35	1	River is free flowing and considered in *Recreational Values on Oregon Rivers* to have outstandingly remarkable anadromous fish values. Listed in *Soggy Sneakers* to have high values for canoeing and kayaking. Seven significant cultural sites are located along the river. The river meets the eligibility criteria. The BLM does not have substantial control of shoreline or adjacent lands along the river, and will not initiate a suitability study.
New River	8	3.5	River is free flowing and considered in *Recreational Values on Oregon Rivers* to have outstandingly remarkable scenic, anadromous fisheries and ecological values. The river meets the eligibility criteria. BLM has control of 19 percent of shoreline and adjacent lands and meets the substantial control criteria for BLM to initiate a suitability study.
Sixes River	28	1.5	River is free flowing and considered on the Outstanding Rivers List to contain outstandingly remarkable fisheries and historic values. The river meets the eligibility criteria. BLM does not have substantial control of shoreline or adjacent lands along the river, and will not initiate a suitability study.
South Fork Pistol River	12	2	River is free flowing and considered in *Recreational Values on Oregon Rivers* to have outstandingly remarkable anadromous fisheries. The river meets the eligibility criteria. BLM does not have substantial control of shoreline or adjacent lands along the river, and will not initiate a suitability study.
North Fork Chetco River	11	2.6	River is free flowing and considered in *Recreational Values on Oregon Rivers* to have outstandingly remarkable fisheries values. Several significant undisturbed cultural sites are located along the river and are considered to be outstandingly remarkable. The river meets the eligibility criteria. BLM has control of 17 percent of shoreline and adjacent lands and meets the substantial control criteria for BLM to initiate a suitability study.

Wilderness

The district manages Squaw Island, a three-acre island near the mouth of Sunset Bay. This island is a designated wilderness area. BLM has identified and inventoried two areas administered by BLM in the planning area having wilderness characteristics and values and has identified them as wilderness study areas. BLM has also evaluated the Cherry Creek Research Natural Area, known as an instant study area (an area formally identified by BLM in 1975 for accelerated wilderness review), to determine whether wilderness values are present. The President has recommended to Congress that the instant study area be released from wilderness review status due to its small size. Proposed legislation is pending. Its status as a Research Natural Area would not be affected. These areas are shown on Map 5 and described in Table 23.

The wilderness study area is being addressed in BLM's Oregon Wilderness Environmental Impact Statement (EIS). The Final EIS was published in 1989 and the President's recommendations are expected to be sent to Congress no later than October 1993.

The wilderness values in all of these areas will be protected by BLM until Congress releases them or designates them as wilderness areas, providing for their continued protection.

Minerals

Since 1980, mineral activity on BLM-administered lands in the planning area has consisted primarily of minor gold exploration and aggregate production. Most locatable mineral activity has been small-scale placer mining. During the early 1980s, there was some oil and gas exploration activity, but there is currently none. Almost all rock aggregate production has been used to build and maintain logging roads.

As of 1989 there were 61 mining claims, one active mining notice of intent and no plans of operations on file. Oil and gas leases covered 6,759 acres. Average annual production of rock in the 1984-1988 period was 13,000 cubic yards. There are 31 active rock pits. The Bureau administers the mineral estate on 12,152 acres of private surface ownership.

It is the Bureau's policy to encourage exploration and development of minerals using environmentally sound practices. Most lands in the planning area are open to activities shown in Table 24. The table also summarizes mineral potential. Locatable minerals data, missing here, are intended to be available for inclusion in the RMP/EIS.

Opportunities exist to revoke discretionary withdrawals and closures that restrict mineral development.

Table 23. Instant Study Areas and Wilderness Study Areas

Area Name	Status/Acreage ISA	WSA	Current BLM Management
Douglas-fir (Cherry Creek RNA) Coos County	570		This area was identified as a Research Natural Area by PLO 3530 on January 29,1965. By legislative definition, it is an instant study area. It was determined by BLM to lack wilderness values because of its small size and lack of opportunity for primitive and unconfined recreation or solitude. Interim management allows existing uses to continue but does not allow new uses until Congress makes a final determination.
North Sisters Rock		3	Both of these rocks are currently being reviewed for inclusion in the Wilderness system in the Oregon Wilderness EIS.
Zwagg Island		5	Interim management allows existing uses to continue but does not allow new uses until Congress makes a final determination.

Table 24. Mineral Potential and Restrictions

Potential	Management Categories (acres)			
		Open	Discretionary	
Non-discretionary	Open	Restricted[1]	Closed	Closed
Locatable Minerals				
Low potential				
Moderate				
High				
Oil and Gas				
Low Potential	96,505	3,443	0	1
Moderate	213,061	4,810	0	48
High	0	0	0	0
Geothermal Resources				
Low Potential	309,520	8,253	0	47
Moderate	0	0	0	0
High	0	0	0	0
Salable Minerals				
Low Potential	303,890	0	7,608	7
Moderate	4,632	0	765	0
High	918	0	40	40

[1]Includes ACECs, ORV closures, visual or seasonal constraints, threatened and endangered species locations, and "no surface occupancy" stipulations.

Lands and Rights-of-Way

The BLM-administered lands in the planning area are arranged generally in a checkerboard pattern, intermingled with lands that are primarily privately owned. This ownership pattern complicates boundary identification and management.

Since approval of the current land use plan, 15 acres have been sold, while 716 additional acres have been transferred out of public ownership in exchange for 1,447 acres of other lands to be administered by BLM.

The current plan identified an additional 7,600 acres of land for disposal, mostly by exchange. There are two active proposals pending to exchange some of these lands. There are several small encroachments of private improvements across property lines, totaling about an acre, which could be resolved by sale.

There are numerous withdrawals on the BLM-administered lands. They cover a wide range of purposes including: Recreation sites, natural areas, ACECs, military facilities, river and harbor maintenance, lighthouse, administrative facilities, wildlife refuges, water and power designations and power site reserves. The current policy is to review these withdrawals on a scheduled basis to determine if they need to be continued or modified.

With more emphasis being placed on recreational development and other special projects such as the Dean Creek Elk Viewing Area and the North Spit Special Recreation Area, new withdrawals will need to be established to protect these areas.

Informal discussions with adjoining landowners have surfaced preliminary interest in land exchanges which could involve a total of about 30,500 acres of BLM-administered lands, and a similar area of forest-industry lands. The potential exchanges present opportunities to improve BLM's management efficiency.

There are several existing utility corridors crossing BLM-administered lands in the planning area. No

proposals for additional corridors are known, but upgrading of existing facilities is likely.

There are ten developed hilltop or ridgetop communication sites on BLM-administered lands. Several sites have public access and utility service. Anticipated demand for additional microwave and emergency radio communications sites is likely to lead to proposals to expand use of all of those sites. Some new sites on BLM-administered lands are expected to be needed for communication or microwave facilities during the 1990s. Specific locations for new sites have not been identified.

BLM-administered land is used for a variety of purposes by other governmental agencies and private parties. Approximately 150 acres are used for county parks and other service facilities under Recreation and Public Purpose Act lease. Rights-of-Way are issued for uses such as water lines, power lines and telephone lines.

Roads

The road system serving BLM-administered lands provides access for harvest of timber and other forest products, for intensive forest management, for recreation, for mineral exploration and removal, and for access to rural home sites.

There are about 1,680 miles of BLM-controlled roads (existing or committed to construction in current contracts) in the planning area. Of these, 1,420 miles are surfaced for all-weather use. Preventive maintenance of the roads controlled by BLM occurs on a regular cycle; corrective maintenance occurs as problems are identified.

Under current district policies 60 miles of road are closed to public use year round, to protect the road surface and minimize erosion or to minimize disturbance to wildlife, particularly in important elk habitats. Another 110 miles are closed seasonally (winter and early spring) for the same purposes. If the current land use plan were extended, about 417 miles of new road would be constructed before the road network anticipated to support the current plan is complete.

Access

In general, legal access is available to most BLM-administered lands in the planning area for BLM management activities (including timber removal) but only about half of the lands are legally accessible to the general public. Under current management direction, acquisition of an additional 120 road easements would be needed to support the future timber management program. Opportunities may exist to negotiate public access rights in conjunction with existing reciprocal right-of-way agreements that now permit only access for BLM administration and timber harvest.

Fire

Wildfires burned 491 acres of BLM-administered lands in the planning area from 1980 through 1989, mostly from fires associated with timber harvest or slash disposal. Current management direction is to control wildfires on or threatening BLM-administered lands at the least total combined cost of fire suppression, land rehabilitation and resource loss. Protection is provided through a contract with the Oregon Department of Forestry, which also provides fire protection on the intermingled (predominantly private) forest lands.

Prescribed (intentional) fires are used, primarily on sites recently logged, to reduce the hazard of wildfire and to prepare the sites for tree planting. The acres burned by prescribed fire in recent years are shown in Table 25.

Table 25. Acres Burned by Prescribed Fire

Year	Number of Units Burned	Logging Slash Disposal/Brush Control	Hazard Reduction	Wildlife Habitat Improvement	Total
1980	95	2,866	0	0	2,866
1981	73	2,203	0	0	2,203
1982	85	2,556	0	0	2,556
1983	73	2,189	0	0	2 189
1984	78	2,344	0	0	2,344
1985	77	2,305	0	0	2,305
1986	98	2,942	0	0	2,942
1987	119	3,502	0	0	3,502
1988	129	3,581	0	0	3,581
1989	174	4,711	0	0	4,711
TOTALS	**998**	**29,202**	**0**	**0**	**29,202**

Socioeconomic Conditions

The counties economically affected by activities on BLM-administered lands in the planning area are primarily Coos and Curry. The combined population of these counties was estimated in 1988 to be 79,600, a decline since 1980.

Total wage and salary employment in the counties averaged 23,528 from 1984 through 1988, of which employment in manufacturing of wood products (excluding paper and allied products) was 4,196. Unemployment in the counties averaged 10.7 percent during that period. Statewide unemployment during the same period averaged 7.7 percent. Personal income in the counties from 1984 through 1988 averaged $918,610. BLM's input-output model (BLMPACT) shows that BLM timber harvest in 1984 to 1988 generated an annual average of 1,443 direct jobs and $38,960,000 of annual personal income. In the same period, recreation use on BLM-administered land generated an annual average of 142 direct jobs and $1,400,000 in personal income. Other activities associated with BLM-administered resources can influence economic activity. An example would be downstream sport and recreation fishing. (An estimate of the economic contribution of these activities is planned for inclusion in the RMP/EIS).

The 18 O&C counties receive half of BLM receipts from O&C lands in western Oregon. These are primarily receipts from timber sales. Revenue from management of other BLM-administered lands is also shared with local political subdivisions. Table 26 shows the average 1984-1988 revenue distribution to each of the counties previously named, from timber sales from O&C lands in the planning area, along with average total county property tax revenues during that period.

Payments made to Coos County in lieu of taxes on reconveyed Coos Bay Wagon Road lands administered by the district averaged $431,800 during fiscal years 1984-1988.

The Regional Economic Development Strategies for the counties in the planning area vary. Coos County is one of the few single-county regions, with a strategy based entirely on maritime trade. Curry County bases its development strategy on tourism. BLM has not yet attempted to identify management activities which could influence these strategies, but several issues to be addressed in the RMP/EIS will bear on this.

Table 26. Average Annual County Revenues, 1984-88

County	O&C Revenues to County	County Property Tax Revenues
Coos	4,439,612	2,849,249
Curry	2,724,513	802,185

Rural Interface Areas

County governments in the district have zoned some forest and adjacent lands for rural residential and other uses which, in some situations, are incompatible with BLM intensive forest management activities. For purposes of this discussion, areas zoned for creation of one- to 20-acre lots and certain other areas of existing multiple residential occupancy which include or adjoin BLM-administered land are referred to as rural interface areas. They are found throughout lower elevations of the district. The amount of BLM-administered land within these identified areas is summarized in Table 27.

In recent years, other land owners or managers in these interface areas have begun to express concerns about some BLM management activities. Often, conflicts can be resolved during project planning. When conflicts cannot be resolved, opposing parties may protest and appeal BLM actions, thereby resulting in more costly management for BLM.

Under the current management framework plans for the district, two project planning guidelines apply to rural interface areas: (1) protect domestic water diversions if necessary; and (2) minimize management impacts in visually sensitive areas where possible. A detailed resource inventory for these values is used to design projects.

Major opportunities to minimize conflicts in rural interface areas are:

- within sensitive rural interface areas, avoid using practices, such as herbicide spraying, slash burning and large clearcuts, which may be objectionable to some land owners;
- within rural interface areas of highly fragmented BLM-administered land, dispose of BLM-administered land.
- in conjunction with lending organizations, develop an acceptable right-of-way document to allow BLM roads for recognized legal access to private home sites.

Table 27. BLM Acres in Rural Interface Areas

Zoning Categories[1] in Interface Areas	BLM Acres Within 1/4-Mile	BLM Acres Within 1/2 Mile
Rural Residential - 1-5 Acre Lots	2,020	12,218
Farm/Forest - 6-20 Acre Lots	47	171

[1]Lot sizes allowed to be created.

Interrelationships with Other Agencies

Interagency coordination with other federal, state and local government agencies is required by BLM regulations (43 CFR Part 1610.3). Many formal coordination relationships between the BLM and these other government agencies or units have been established through memoranda of understanding (with Interior Department agencies) and interagency agreements (all discussed hereafter as agreements). A number of these have been approved by the director of the Bureau and are sufficiently detailed to preclude the need for state- or district-level agreements. Some national-level agreements have local supplemental agreements between lower level units of agencies. In addition, the state director has approved independent state-level agreements, while the district manager has approved agreements with county governments. In general, these agreements deal with mechanisms for coordination, consultation and documenting consistency and therefore do not constrain resource allocations or management direction unless they are non-discretionary (mandated by federal law, executive order or treaty). Some local agreements are very specific and involve techniques for managing public lands to meet detailed objectives for plant and animal habitat, research projects, big game transplants or multi-purpose communication sites. Any agreement element which is discretionary can be modified as a consequence of the RMP decision making process. Such agreements normally contain standard "escape clauses" that come into operation in the event of inadequate funding, discovery of contradiction with federal law, or the need to amend or revise the agreement due to newly approved plans, changes in resource condition, etc.

Relevant coordination occurs with the following agencies regarding the activities noted:

U.S. Forest Service - regarding plans, activities, and projects on adjacent lands.

U.S. Fish and Wildlife Service - regarding plans and activities that may affect a federal threatened, endangered, or proposed threatened or endangered species or its critical habitat, or a federal candidate species.

Bonneville Power Administration - regarding improvement of riparian zones and anadromous fish habitat as part of the Columbia Basin Fish and Wildlife Program of the Northwest Power Planning Council as authorized by the National Power Planning Act. Also regarding identification and evaluation of regional utility corridor options.

U.S. Army Corps of Engineers - regarding the Corps' authority, under the Clean Water Act, to regulate the discharge of dredged or fill materials into any estuary or wetland or stream with a flow in excess of five cubic feet per second.

National Marine Fisheries Service - regarding planning and activities which may affect marine, estuarine or anadromous fish resources.

Soil Conservation Service - regarding the National Cooperative Soil Survey.

National Park Service - regarding planning and activities that could affect an identified inventory or study river's ability to meet Wild and Scenic Rivers Act eligibility or classification criteria.

Oregon Department of Fish and Wildlife - regarding planning and activities affecting wildlife or fish habitat.

Oregon Department of Forestry (OSDF) - regarding BLM compliance with the Oregon Forest Practices Act in the conduct of timber harvest, reforestation, road construction and maintenance, chemical applications, and slash disposal. Also regarding BLM compliance with the statewide Smoke Management Plan and Visibility Protection Plan under the umbrella of the Federal Clean Air Act. And regarding fire protection, for which OSDF is BLM's primary contractor in the planning area.

Oregon Department of Environmental Quality - regarding BLM compliance with the Statewide Water Quality Management Plan, under the umbrella of Section 208 of the Federal Clean Water Act. Also regarding treatment and control of water pollution sources where such may be associated with BLM facilities.

Oregon Energy Facility Siting Council - regarding any proposed power plant larger than 25 megawatts, proposed electric transmission line over 230 KV in capacity or proposed natural gas line at least 16 inches in diameter.

Oregon Department of Agriculture - regarding noxious weed control programs and the state endangered plant species program. BLM coordinates site-specific noxious weed control activities with local weed control districts.

Division of State Lands - regarding BLM compliance with Oregon's Removal-Fill law, which regulates removing and filling of materials from and in the waters of the state.

Highway Division, Oregon Department of Transportation - regarding road planning in the vicinity of federal and state highways. Similar cooperation takes place with county road departments regarding county road systems.

Oregon Department of Parks and Recreation - regarding management of BLM-administered land adjacent to state parks and state scenic waterways.

Oregon Department of Geology and Mineral Industries - regarding mined-land reclamation on BLM-administered lands.

State Historic Preservation Office - regarding sites protected by National Historic Preservation Act regulations.

Land Conservation and Development Commission, through the Department of Land Conservation and Development - regarding consistency of BLM plans and activities with the Oregon Coastal Management Program, under the umbrella of the Federal Coastal Zone Management Act.

Counties - regarding consistency of BLM plans with acknowledged county comprehensive plans, as well as regarding a variety of BLM plans and activities that may affect county road systems, county parks and county natural resource management activities. BLM also participates in review of county planning actions in order to alert counties to potential conflicts and inconsistencies with BLM forest management plans or other plans.

The Confederated Tribes of Coos, Lower Umpqua and Siuslaw Indians and the Coquille Tribe - regarding consultation as required by the Archeological Resources Protection Act and the Historic Preservation Act. Also regarding plans or activities that may affect tribal interests, treaty rights or traditional resource use areas.

The Oregon International Port of Coos Bay - regarding activities or plans on lands adjacent to or which may affect Port lands on the North Spit.

Appendix 1

The Resource Management Planning Process

The Resource Management Plan is a "Land Use Plan" as prescribed by the Federal Land Policy and Management Act. The RMP establishes in a written document:

- Land areas for limited, restrictive, or exclusive resource uses or for transfer from BLM administration;
- Allowable resource uses and related levels of production or use to be maintained;
- Resource condition goals and objectives to be reached;
- Program constraints and general management practices;
- Identification of specific activity plans required;
- Support actions required to achieve the above;
- General implementation schedule; and
- Intervals and standards for monitoring the plan to determine its effectiveness.

The underlying goal of the RMP is to provide efficient on-the-ground management of public lands and associated resources.

The procedure for preparing an RMP involves nine interrelated actions as shown in Table 3-1. Some actions may occur simultaneously and it may be necessary to repeat an action if additional information becomes available. The plan that results from this process is a general decision document designed primarily to help district and area managers make decisions, and to guide the efforts of staff on a day to day basis. Where more detailed management direction is required, specific activity plans will be prepared after the RMP is completed.

Preparation of the Coos Bay District RMP was initiated in the fall of 1986, with public involvement in the identification of preliminary planning issues and concerns. The first four steps of the RMP process have been completed, except for any modifications that may occur as a result of public review of this summary or the full AMS.

After the plan is implemented, it will be monitored and evaluated on a continuing basis to assure that land management issues are being addressed as expected and that it is accomplishing its intended results.

Public involvement and consultation with affected state and local governments is required at several points in the RMP process. This consultation is essential so the final resource management plan will be as consistent as possible with state and local natural-resource-related plans, programs and policies.

Table 3-1. Resource Management Planning Process

Step	Completion Target
1. Identification of Issues	Completed
2. Development of Planning Criteria	Completed
3. Inventory Data and Information Collection	Completed
4. Analysis of Management Situation	Completed
5. Formulation of Alternatives	Early 1991
6. Estimation of Effects	Mid 1991
7. Selection of a Preferred Alternative	
a. Draft RMP/EIS	Late 1991
b. Final RMP/EIS	Mid 1992
8. Selection of the Resource Management Plan	Late 1992
9. Monitoring and Evaluation	Start 1993

Appendix 2.

Public Involvement in the Process So Far

Public involvement has been an integral part of BLM's resource management planning (RMP) process from the outset. To date public involvement activities have included a series of information mailers or brochures, public meetings, open-house meetings, field trips, distribution of planning documents, document review and comment periods, informal contacts, group meetings, written letters and responses to comments. Our efforts began in May, 1986, with a mailer that asked for comments on the type of public involvement activities that should be conducted in the planning process.

In September, 1986, a district mailer outlined the overall planning schedule and requested comments on the first major planning step, Issue Identification. BLM invited people to identify issues or concerns they believed should be addressed in the RMP process. A news release announcing this step was printed in The World and several local weekly newspapers. During this planning step, each western Oregon district hosted an open house to help acquaint local citizens with the planning process and schedule and to discuss issues related to the planning process. A total of 24 people attended two open house type meetings in Coos Bay in October, 1986.

Building on public comments received during the issue identification step, BLM prepared and distributed another district mailer in March, 1987, summarizing publicly identified issues and concerns. The mailer also addressed the second and third planning steps: Development of Planning Criteria, including State Director Guidance, and Collection of Inventory Data. The mailer included a schedule of public meetings and/or field trips hosted by each district to review and discuss the technical elements of inventory collection, particularly forest inventory techniques. The mailer also disclosed a proposed element of planning criteria by identifying a proposed timber harvest computer model, and an opportunity for public comment on the model. Eleven people attended two open house type meetings in May, 1987, where BLM described the method being used in conducting the Timber Production Capability Classification and Operation Inventory for the planning process.

In August, 1987, BLM distributed another mailer dealing with Planning Criteria and proposed State Director Guidance. This mailer requested comments on relevant topics for State Director Guidance and included a schedule for public demonstration of the proposed timber harvest computer model. Demonstrations were conducted in Roseburg and Portland in September, 1987. Fourteen people attended the Roseburg demonstration of the proposed TRIM-PLUS Allowable Harvest Model. The session included a comparative look and discussion of other harvest models with TRIM-PLUS and a demonstration of how the model works.

In January, 1988, a mailer was distributed to inform the public of the upcoming availability of the State Director Guidance Document. Interested publics were asked to return a request to receive a copy of the document.

A draft State Director Guidance Document was mailed to all those who requested copies in May, 1988. Additional copies were made available through all district offices, and open-house meetings were held in each district and the state office. The Coos Bay District held an open house attended by 31 people on June 11, 1988 to discuss the State Director Guidance Document. A comment period followed, with approximately 70 written responses sent to the state director by the end of August, 1988. One of these responses was a lengthy document prepared and submitted by the Coos Bay District Advisory Council. Proposed revisions to some elements of that guidance and responses to public comments were shared with the original respondents for further comment in several letters during 1989 and 1990.

In addition to the above formal notifications the district mailed seven separate newsletters to a mailing list of approximately 700 people informing them about the status of the planning process during 1988 and 1990. District Advisory Council members also have been briefed at each meeting held since 1986.

An ongoing effort throughout the process has involved members of the district staff and management team seeking opportunities and giving numerous presentations to local groups, service clubs and associations.

Appendix 3

Guidance for Formulation of Alternatives

Introduction

The purpose of alternatives is to identify a range of reasonable combinations of resource uses and management practices that respond to planning issues and provide management direction for all resources. Five common alternatives will be addressed in each RMP, to provide a consistent set of distinct choices among potential management strategies.

A no change from the existing land use plan alternative will also be addressed. This is the "no action" alternative. In the other alternatives all existing land use decisions not found valid for continued implementation after 1990 (through an analysis summarized in the Analysis of the Management Situation), will be reconsidered.

Common alternatives that identify specific management actions along District boundaries will be consistent. Examples include elk management areas, spotted owl corridors or visual corridors.

This Guidance for Formulation of Alternatives may be modified later based on information identified in the districts' analyses of the management situation, or refinements that flow from the districts' site-specific development of common alternatives.

Goals and Objectives of the Common Alternatives

The purpose of the goal and objective statements for the five common alternatives (A through E) is to guide development of specific criteria. Each alternative, if implemented, is intended to achieve or meet its goal. Goal and objective statements focus on general direction of alternatives rather than technical points in issue-related criteria for the alternatives. In each alternative all resource management values would be accommodated to the extent consistent with the primary goals and objectives for that alternative.

Specific Guidance on Common Alternatives

The common alternatives would differ primarily in the way they allocate primary uses of lands (for example, lands allocated to intensive forest management, and lands allocated to protection of riparian zones).

The discussion on pages 4 through 14 describes criteria for addressing each of the eleven planning issues in the formulation of the common alternatives. It also describes how land use allocations and management actions would vary in response to each issue. Within the specific constraints provided by the guidance for addressing each issue, the districts have flexibility to formulate the common alternatives as they consider appropriate to meet the goals and objectives of each alternative.

	Alternative A	Alternative B
GOALS:	Emphasize high production of timber and other economically important values on all lands to contribute to community stability.	Emphasize timber production to contribute to community stability consistent with the variety of other land uses such as fish and wildlife habitat, recreation, and scenic resources on O&C and CBWR lands. Give equal consideration to all resource values on public domain lands.
OBJECTIVES:	• Produce the highest sustained yield of timber on all suitable forest lands legally available for harvest. • Contribute to ecological functions important to timber productivity and to habitat diversity to the extent possible consistent with the allocation for timber production. • Manage threatened and endangered species habitat as legally required. • Provide Research Natural Areas and eligible Areas of Critical Environmental Concern to the extent consistent with the allocation for timber production. • Manage appropriate Congressionally designated areas to maintain and enhance their scenic values. • Meet legal requirements for protection of wetlands and water quality, to protect anadromous fish habitat and other relevant values. • Emphasize substantial developed and dispersed motorized recreation uses. • Find no additional rivers suitable for designation under the Wild and Scenic Rivers Act. • Make land tenure adjustments which enhance BLM long-term sustained yield timber harvest opportunities. • Provide no special management in rural (residential) interface areas.	• Produce a high sustained yield of timber on O&C and CBWR lands, and on public domain lands where nontimber uses and values are of lesser importance than timber production. • Contribute to ecological functions important to timber productivity and to habitat diversity using a system that maintains old growth and mature forest in large and small blocks. • Protect habitat of all threatened and endangered species and species with high potential for listing. Protect habitat of other species of substantial concern to the extent consistent with high timber production. • Retain existing Research Natural Areas (RNAs) and Areas of Critical Environmental Concern (ACECs). Provide new ones from eligible areas to the extent consistent with the emphasis on timber production. • Manage scenic resources in selected areas of high recreation use. • Meet legal requirements for protection of wetlands and water quality and provide moderate additional protection for anadromous fish habitat, other substantial streams, and other water. • Provide for a wide range of developed and dispersed motorized recreation uses and opportunities, to minimize conflicts among recreation user groups. • Find eligible river segments suitable for designation as recreational, if they are important and manageable, and designation would not cause adverse economic impact. • Make land tenure adjustments which enhance BLM long-term sustained yield timber harvest opportunities on O&C and CBWR lands, and which benefit a variety of uses and values on public domain lands. • Adopt appropriate special forest management practices on BLM-administered lands intermingled with or adjacent to rural interface areas zoned for most dense residential occupancy.

Alternative C	Alternative D	Alternative E
Provide timber production to contribute to community stability consistent with maintenance of biological diversity and the variety of other uses such as fish and wildlife habitat, recreation, and scenic resources on all lands.	Emphasize protection and reestablishment of spotted owl habitat, along with management and enhancement of other values such as dispersed nonmotorized recreation opportunities and scenic resources, while sustaining some timber production.	Emphasize protection of older forests and management and enhancement of values such as dispersed nonmotorized recreation opportunities and scenic resources.
• Produce a moderate sustained yield of timber. • Provide biological diversity using a system that maintains some old growth and mature forest, focusing on protection of areas where special status plant and animal species cluster. • Protect habitat of all threatened and endangered species and species with high potential for listing. Protect habitat of other species of substantial concern through emphasis on biological diversity and to the extent consistent with moderate timber production. • Retain existing RNAs and ACECs. Provide new ones from eligible areas except where lands managed by others are considered to provide more appropriate opportunities. • Manage scenic resources in selected high use areas, particularly emphasizing protection in corridors of existing and proposed wild and scenic rivers and major trails. • Provide substantial protection for anadromous fish habitat, other substantial streams and other water environments. • Provide for a wide range of recreation opportunities emphasizing dispersed use, while reducing conflicts among recreational user groups. • Find eligible river segments suitable for designation as scenic or recreational, if they are important and manageable, and designation would not cause adverse economic impact. • Make land tenure adjustments to benefit a variety of uses and values. • Adopt appropriate special forest management practices in rural interface areas zoned for moderate or high density residential occupancy.	• Produce a sustained yield of timber consistent with allocations for other uses and values. • Protect habitat of the spotted owl in accordance with the Owl Conservation Strategy. • Protect habitat of all threatened and endangered species, species with high potential for listing, and species of related concern. • Retain all existing RNAs and ACECs. Provide new ones from eligible areas except where lands managed by others are considered to provide more appropriate opportunities. • Manage all identified scenic resources. • Provide substantial protection for wetlands and riparian areas along most streams and other water. • Emphasize dispersed nonmotorized recreation opportunities. • Find eligible river segments suitable for designation as wild, scenic or recreational, if they are important and manageable. • Make land tenure adjustments which would emphasize enhancement of nontimber uses and values. • Adopt special timber harvest and forest management practices in rural interface areas zoned for moderate or high density residential occupancy.	• Produce a sustained yield of timber consistent with allocations for other uses and values. • Protect all old growth and older mature forests. • Protect habitat of all threatened and endangered species, species with high potential for listing and species of related concern. • Retain all existing RNAs and ACECs and designate all eligible areas. • Manage all identified scenic resources and provide some visual resource protection for all lands. • Manage all riparian areas and wetlands to maintain and improve water quality and fisheries habitat, and contribute to wildlife habitat diversity. • Emphasize dispersed nonmotorized outdoor recreation opportunities. • Find all eligible river segments suitable for designation as wild, scenic or recreational rivers. • Make land tenure adjustments which would emphasize enhancement of nontimber uses and values. • Adopt special timber harvest and forest management practices extensively buffering rural interface areas zoned for moderate or high density residential occupancy and other rural interface areas as appropriate.

	All Common Alternatives	Alternative A
Issue No. 1: Timber Production Practices: Which forest lands should be available for timber management, and what practices should be used on those lands?	Guidance for All Common Alternatives: Lands allocated to intensive forest management under any of these alternatives would normally provide the highest nondeclining harvest level (even flow) of timber when the following conditions prevail: • Effective silvicultural techniques (such as clear cutting, shelterwood or partial cutting) appropriate to the land allocations are used. • All feasible site preparation and intensive management practices are applied. • Anticipated merchantability is the only constraint on minimum average stand diameter slated for future harvest. (In some areas this may result in harvest of timber stands as young as 40 years for several decades during the early to middle part of the next century under some alternatives.) • Adequate budgets are available to support the resultant timber sale program and allied intensive management practices, as well as scheduled monitoring linked to those activities. The common alternatives assume these practices and conditions on the lands allocated to intensive timber management, but incorporate less intensive management practices on other available forest lands to the extent needed to be consistent with the allocation of those lands. Where consistent with the goals and objectives of each alternative, the following silvicultural and harvest practices would be implemented on lands allocated primarily to timber management, to meet multiple land use objectives: Minimize regeneration delay by reforesting harvested sites as soon as practical. Calculate an empirical regeneration period based on representative stocking survey results, expected timber sale contract lengths and management objectives. Reforest harvested lands with indigenous commercial tree species. Emphasis would be placed on utilization of genetically improved stock in accordance with the Western Oregon Tree Improvement plan. Manage tree seed orchards to produce adequate supplies of genetically improved seed. Use available site preparation and seedling protection practices, including herbicides, using an integrated vegetation management approach. Emphasize those techniques that have proved most effective in assuring seedling survival and growth. (Actual practices will be based on site-specific analysis following completion of the RMP.) Convert to conifers those lands classified as commercial forest lands presently occupied by grass, hardwoods and brush.	Allocate all forest lands for timber production consistent with the management direction for other resources (Issue Nos. 2 and 3, etc.) in this alternative, except the following: Nonsuitable Woodland (See Figure 3-1 for Chart showing TPCC categories.)

Alternative B	Alternative C	Alternative D	Alternative E
Allocate all forest lands for timber production consistent with the management direction for other resources in this alternative, except the following: Nonsuitable Woodland Suitable Woodland - Low Site	Allocate all forest lands for timber production consistent with the management direction for other resources, except the following: Nonsuitable Woodland Suitable Woodland - Low Site Suitable Woodland - Nonsuitable Commercial Forest Land	Allocate all forest lands for timber production consistent with the management direction for other resources, except the following: Nonsuitable Woodland Suitable Woodland - All Categories	Allocate all forest lands for timber production consistent with the management direction for other resources, except the following: Nonsuitable Woodland Suitable Woodland - All Categories The Fragile Gradient-Restricted component of the Fragile Suitable TPCC category Site Class V

	All Common Alternatives	Alternative A
Issue No. 1 (Continued)	Plan hardwood sites for management of a sustained yield of hardwoods, where consistent with allocations for other uses or values. Implement commercial thinning of present and future stands where practicable and where research indicates increased gains in timber production are likely. Practice initial spacing control of seedlings/ saplings through planting or thinning in conjunction with the control of competing vegetation, to maximize wood production by concentrating site resources in individual tree growth. Plan nitrogen fertilization applications for all present and future stands where research indicates increased wood yields would result. Plant specific root disease centers with resistant tree species. Consider uneven-age management in stands where this method would be economically feasible and would maintain environmental values. Consider efficiency of field operations and assurance of prompt reforestation in selecting the size of timber harvest units. Apply proper soil management measures to maintain soil productivity.	
Issue Nos. 2 and 3: Old-Growth Forests and Habitat Diversity To what extent and where should old-growth and/or mature forest habitats be retained, maintained or reestablished to meet various resource objectives? To what extent and where should BLM manage habitat to support populations of native wildlife species?	Any wildlife habitat management practice (such as nest boxes, road closures and forage seeding) not listed in the following could be implemented under any of the alternatives, as long as it is compatible with other management objectives. All special habitat features would be managed to protect their values. Mature and old-growth forests would be retained where Congressional designation of areas requires it. Snags and/or wildlife trees (to be converted to snags) would be retained where they occur on lands not allocated to timber harvest, except where public safety is a concern, and if left standing as nonmerchantable material on available forest lands. Where it would contribute to meeting wildlife tree objectives, create snags in areas not allocated primarily to timber production. A habitat goal of timber sale contracts would be to leave all snags and nonmerchantable trees that can be left consistent with safety considerations.	Mature and old-growth forests would be retained on most lands excluded from planned timber harvest by inclusion in the following allocations and TPCC categories: Nonsuitable Woodland Riparian Management Areas Existing high-use recreation sites T&E species recovery areas where timber harvest is prohibited Wilderness Areas

Alternative B	Alternative C	Alternative D	Alternative E
Contribute to habitat diversity using a system that protects mature and old-growth forest in large and small blocks. Mature and old-growth components of the forest would be distributed in a corridor system by seed zone and elevation. In the corridor system large blocks of approximately 640 acres would be connected by a series of small, stepping stone blocks of approximately 80 acres, spaced at about one-mile intervals. Blocks would be limited to defined corridor areas. Public Domain lands and the following allocations and TPCC categories on O&C and CBWR would receive priority for placement into the system, to the extent that they fit; for instance, if they provide needed habitat and are suitably located to contribute to the system. Nonsuitable Woodland Suitable Woodland - Low Site Riparian Management Areas Recreation Sites T&E species recovery areas where timber harvest is prohibited Special Areas (Natural Areas, ACECs) Wilderness Areas	This alternative would provide for intensive management of wildlife habitat and maintenance of biological diversity. It would strive to attain a balance of forest seral stages and associated plant and animal communities. Varying sized blocks of mature and old-growth forests would be spatially distributed over BLM-administered land, focusing on protection of identified areas where special status plants and animal species cluster. Where clustering is not apparent, alternative design would focus on seral stage balance and spatial distribution. The old-growth stands and other stands intended to attain old-growth status would be excluded from timber harvest except where other management is appropriate to benefit the special status species. Public Domain lands and the following allocations and TPCC categories on O&C and CBWR would receive priority for placement into the system, to the extent that they are suitably located: Nonsuitable Woodland Suitable Woodland - Low Site Suitable Woodland - Nonsuitable Commercial Forest Land	This alternative would manage habitats on BLM-administered lands to provide for a number and distribution of spotted owls that ensures continued existence of a well distributed population on those lands, so they may interact with spotted owls throughout the geographic range of the species, as recommended by the Conservation Strategy for the Northern Spotted Owl. Suitable wildlife trees would be retained to contribute to the maintenance of cavity-dweller populations on BLM-administered lands at 60 percent of the optimum population level. Wildlife tree and down log management practices would be used on the available forest lands, including but not limited to retention of green culls, snags and down logs. All special habitat features would be appropriately buffered.	This alternative would preserve the following: - all existing forest stands over 150 years old. - additional lands proximate to the above stands, to assist in maintaining natural ecological elements, protect the older stands from edge effect and natural disaster, and interconnect them into a sustainable network. - within two miles of each spotted owl nest or habitat core occupied by a pair of owls in the last three years, at least the acreage (where available) of suitable habitat considered to provide a high probability of continued occupancy by a pair of owls. In addition to retention of wildlife trees on lands not allocated to timber management, suitable wildlife trees would be retained to contribute to the maintenance of cavity-nester populations at 60 percent of the maximum potential population level on lands allocated

	All Common Alternatives	Alternative A
Issue Nos. 2 and 3 (Continued)		
Issue No. 4: Threatened and Endangered (and Other Special Status) Species Habitat What should BLM do to manage Federally listed threatened or endangered plants and animals and to prevent future Federal listing of plants and animals as threatened or endangered species?	Protect, monitor and manage habitats of Federal listed and proposed species in accordance with the Endangered Species Act and recovery plans, as legally required for self-sustaining survival.	Timber production constraints would be assumed in the formulation of the alternative only if critical habitat has been designated or there is a recovery or conservation plan within a month after completion of the Analysis of the Management Situation. Manage for the conservation of, and mitigate actions to protect habitats of, Federal Candidate, State Listed and Bureau Sensitive species where such actions would not diminish commercial use such as timber production.
Issue No. 5: Special Areas What areas on BLM-administered lands need special management to prevent irreparable damage to important historic, cultural or scenic values; to protect botanical or fish and wildlife resources or other natural systems or processes; and to protect life and safety from natural hazards? Which of these areas should be formally designated as Areas of Critical Environmental Concern (ACEC)?	Any areas considered appropriate for Research Natural Area (RNA) designation would also be considered appropriate for ACEC designation.	Designate potential ACECs that meet criteria only if the relevant values are not protected by other authorities (e.g., Wild River designation, the Endangered Species Act). Existing ACECs and potential ACECs that meet the preceding standard, including RNAs and proposed RNAs, would be retained or designated on nonforest lands or nonsuitable woodlands of no substantial mineral potential. Other existing ACECs and RNAs would be revoked.

Alternative B	Alternative C	Alternative D	Alternative E
Suitable wildlife trees and/or snags would be retained to contribute to the maintenance of cavity-dweller populations on BLM administered lands at 40 percent of the optimum population level. Wildlife tree management practices would be used on the available forest lands, including retention of green culls and snags.	Riparian Management Areas Recreation Sites T&E species recovery areas where timber harvest is prohibited Special Areas (Natural Areas, ACECs) Wilderness Areas Also incorporated would be a system of experimental habitat management areas (HMAs) established at strategic locations on BLM-administered lands, selected from proposed Category I and 2 HCAs in the scientific committee's Spotted Owl Conservation Strategy and other key spotted owl habitats. A habitat management plan prepared for each HMA would specify strategies for intensively managing the habitat for the long term existence of the spotted owl, including transplanting owls from one area to another, silvicultural practices to enhance habitat for owls and other appropriate measures. Suitable wildlife trees would be retained to contribute to the maintenance of cavity-dweller populations on BLM administered lands at 60 percent of the optimum population level. Wildlife tree and down log management practices would be used on the available forest lands, including but not limited to retention of green culls, snags and down logs. All special habitat features would be appropriately buffered.		to timber management. Wildlife tree and down log management practices would be used on the available forest lands, including but not limited to retention of green culls, snags and down logs. All special habitats would be appropriately buffered.
Same as Alternative A, except protect habitats of Federal Candidate, State Listed and Bureau Sensitive Species to the full extent on public domain land, and protect habitats of Federal Candidate (i.e., Category 1 and 2) species known only to occur on BLM-administered lands to the extent considered necessary to prevent their federal listing.	Same as Alternative B except for additional protection of special status species provided by criteria for Issues 2 and 3.	Manage all BLM-administered lands to support the conservation and protection of all Federal Candidate, State Listed, and Bureau Sensitive species and their habitats.	Same as Alternative D.
Retain all existing ACECs and RNAs. Designate potential ACECs that meet criteria only if the relevant values are not protected by other authorities. Do not allocate new RNAs on available O&C or CBWR land if a similar feature can be protected on a National Forest. Designate all potential ACECs (including RNAs) on Public Domain lands, nonforest lands, nonsuitable woodlands, and other lands allocated to nontimber uses.	Retain all existing ACECs and RNAs. Designate potential ACECs that meet criteria only if the relevant values are not protected by other authorities.	Retain all existing and designate all potential ACECs.	Same as Alternative D.

	All Common Alternatives	Alternative A
Issue No. 6: Visual Resources Which, if any, areas of BLM lands should be managed to reduce visual impacts or enhance visual (scenic) quality?	Note: Guidance for Issue 11 (Rural Interface Area Management) also addresses and defines visual resource management for Alternatives B, C, D and E in rural interface areas, except where this Issue 6 guidance sets a higher standard of visual resource management. Guidance for Issue 9A (Wild and Scenic Rivers) establishes criteria that will substantially dictate visual resource management by alternative in proposed wild and scenic river corridors. See Issue 9A and Issue 11 guidance for details.	Provide VRM Class I management within existing boundaries designated by Congress for exclusive management. Manage all other available (for timber harvest) forest land under VRM Class IV management objectives. Manage other lands as inventoried.
Issue Nos. 7 and 8: Stream/Riparian/Water Quality Where and how should riparian zones be managed to protect and improve water quality, fisheries and wildlife habitat? What actions should be undertaken to comply with state water quality standards? What should BLM do to manage for special needs such as municipal and domestic use?	Guidance for All Common Alternatives: Establish Riparian Management Areas (RMAs) on perennial streams (generally, 3rd order and larger streams), lakes, ponds and other waters, to meet Oregon Forest Practices Act requirements and Oregon water quality standards. Typical average widths of RMAs by alternative are displayed in Table 1. Within those RMAs no lands would be considered "available" (to offer timber for sale as part of the allowable sale quantity). Some timber harvest may occur, however, to achieve resource management objectives. These activities may include road construction and yarding corridors across streams and riparian zones to facilitate timber harvest outside the RMA. Logging, road building and site preparation methods would be designed to minimize the number and/or size of mass soil movements and to maintain the integrity of the RMAs. Other activities such as mining, recreation and ORV use would be regulated to protect water quality. Stream and riparian habitat improvement measures may be taken on any streams to improve water quality, fish habitat and/or wildlife habitat. Activities would be designed to meet Oregon Forest Practices Act (OFPA) requirements and Oregon water quality standards. Comply with written agreements with public water systems serving municipalities.	
Issue No. 9: Recreation Resources What areas or sites should be designed and/or managed to protect or enhance a variety of recreational opportunities?	Manage for dispersed recreation activities consistent with managed forest settings, including hunting, fishing, sightseeing, riding/hiking, and rafting. Maintain and manage existing recreation facilities which make available significant dispersed recreation opportunities, including recreation sites, boat ramps, trails, interpretive signs and related improvements. Manage existing Special Recreation Management Areas (SRMAs) and delineate Extensive Recreation Management Areas (ERMAs).	Manage existing high-use recreation sites and trails and expand them where needed. Close low use recreation sites and trails. Designate lands open to off-road vehicles (ORV) and leave roads open to motorized use, except where such designation would conflict with other allocations.

Alternative B	Alternative C	Alternative D	Alternative E
Provide VRM Class I management within existing boundaries designated by Congress for exclusive management. Manage as inventoried all available forest land adjacent to (within a quarter mile) developed recreation sites, state and federal highways, state scenic waterways, and rivers designated under the federal Wild and Scenic Rivers Act. Manage all other available forest land under VRM Class IV management objectives. Manage other lands as inventoried.	Same as Alternative B, except on available forest land where federal land ownership makes up more than half of a viewshed, manage lands as inventoried.	Manage all lands as inventoried.	Same as Alternative D, except manage as VRM Class III all BLM-administered lands inventoried as Class IV; and manage as VRM Class I BLM-administered lands adjacent to (within a quarter mile) developed recreation sites, state and federal highways, state scenic waterways and rivers designated under the federal Wild and Scenic Rivers act.

Table 3-1. Riparian Management Areas

Stream Order	Average RMA Width* (each side of the stream in feet) ALT. A	ALT. B	ALT. C	ALT. D	ALT. E
1					50
2				60	60
3	75	75	105	140	140
4	75	100	150	200	200
5	75	140	210	280	280
6	75	160	240	320	320
Lakes, Ponds & Other Waters	75	100	150	200	200

* Actual RMA widths would be determined by on-the-ground riparian vegetation, terrain and stream characteristics, but would be a minimum of 50 feet on all 3rd order and larger streams. First and second order streams would have RMAs designated if perennial or if the beneficial uses warrant.

Same as Alternative A, except support the State's Regional Economic Development Plan for the geographic area, retain options for new SRMAs and high value potential recreation sites and trails on Public Domain lands, maintain and/or improve all existing developed recreation sites, and consider reopening sites closed in recent years.	Allocate and manage new SRMAs. Continue management of all existing recreation sites and trails, and consider reopening sites closed in recent years. Emphasize wildlife viewing, interpretation and related old-growth forest recreation opportunities, both to attract nonlocal visitors and to serve local users. Retain options for future development of high value potential sites, trails and sightseeing opportunities. Impose additional ORV limitations or road closures to protect wildlife habitat or old-growth forest recreation opportunities, minimize conflicts with hikers and horseback riders, or meet other resource objectives.	Same as Alternative C, except manage for an optimum range of nonmotorized recreation. Retain options for future development of recreation sites and facilities for dispersed recreation opportunities. Retain existing pockets of old-growth forest that are both adjacent to and accessible from existing or potential recreation areas. Prohibit ORV and road use as appropriate to improve wildlife habitat or protect the ecosystem.	Same as Alternative D.

	All Common Alternatives	Alternative A
Issue No. 9A: Wild and Scenic Rivers What, if any, rivers should be found suitable for designation?	Provide interim protection for all river segments determined to be suitable, until Congressional action on BLM plan recommendations. Interim protection should be appropriate to the highest category for which the river is determined to be suitable. Manage Congressionally designated rivers consistent with their designation.	No rivers found suitable for designation under any classification.
Issue No. 10: Land Tenure In what areas would BLM-administered lands be sold, exchanged or transferred out of federal ownership under other authorities to improve management efficiency and benefit resource program objectives? In what areas would BLM attempt to acquire lands to improve management efficiency and benefit resource program objectives?	A major lands program effort would use exchanges to consolidate land ownership patterns to benefit one or more of the resources managed, such as timber, watershed, wildlife habitat, recreation, cultural, botanical, and minerals. Land tenure adjustment would be guided by a three-zone concept utilizing the following standards: Zone 1 includes areas currently identified as having high public resource values, and other efficiently managed lands. The natural resource values may require protection by federal law, Executive Order or policy. These lands may have other values or natural systems which merit long term public ownership. They do not meet the criteria for sale under FLPMA Section 203(a) and would generally be retained in public ownership. The Zone 1 boundaries should be relatively close to or on BLM property lines except where the intent is to show preferred acquisition areas. Zone 2 includes lands that are suitable for exchange because they form discontinuous ownership patterns, are less efficient to manage than Zone 1 lands, and may not be accessible to the general public. Where appropriate opportunities are identified, these BLM-administered lands may be exchanged for other lands in Zones 1 or 2, transferred to other public agencies, or given some form of cooperative management. These lands would not be expected to meet the criteria for sale under Section 203(a), and would not be identified as suitable for such sale. Zone 3 includes lands that are scattered and isolated with no known unique natural resource values. Zone 3 lands are available for use in exchanges for private inholdings in Zone 1 (high priority) or Zone 2 (moderate priority). They are also potentially suitable for disposal through sale	Exchanges would be made to acquire lands which would enhance the nondeclining harvest level of the commercial forest land managed by BLM, by improving age class distribution or other harvest level determination factors. Factors to consider include site quality, access to public forest land, logical logging units, and management of public forest land to facilitate timber harvest. No exchanges would be made to acquire lands more valuable for nontimber uses. No commercial timberland would be sold or leased. Leases or conveyance of land in Zones 2 and 3 other than commercial timberland would be made under the Recreation and Public Purposes Act to provide appropriate facilities or services.

Alternative B	Alternative C	Alternative D	Alternative E
No rivers found suitable for designation as wild or scenic. River segments eligible for wild, scenic or recreational classification found suitable for designation as recreational, if all of the following circumstances exist: - no net adverse economic impacts on the local economy. - river segment possesses at least one outstandingly remarkable value for which it is considered by BLM to be the top river in the State Comprehensive Outdoor Recreation Plan (SCORP) region. - BLM can effectively manage the outstanding values of the river segment.	River segments eligible for scenic or recreational river status found suitable for designation consistent with their highest potential classification, and river segments eligible for wild classification found suitable for designation as scenic, if all of the following circumstances exist. If only the economic impact test is not met, find suitable for designation as recreational. - no net adverse impacts on the local economy. - river segment possesses at least one outstandingly remarkable value for which it is considered by BLM to be among the top two rivers in the SCORP region. - BLM can effectively manage the outstanding values of the river segment.	Eligible river segments found suitable for designation consistent with their highest potential classification if the following circumstances exist. - river segment possesses at least one outstandingly remarkable value for which it is considered by BLM to be among the top four rivers in the SCORP region. - BLM can effectively manage the outstanding values of the river segment.	All eligible river segments found suitable for designation consistent with their highest potential classification.
Exchanges of O&C and CBWR lands would be made primarily to acquire lands which would enhance timber management opportunities. Exchanges of public domain lands would be made to benefit one or more of the resources managed, including nontimber values. Sale of O&C and CBWR lands other than available commercial forest lands, and of public domain lands, would be made to dispose of lands that meet any of the criteria of FLPMA Section 203(a). Leases on such lands would be made to accommodate other uses. Leases or conveyances under the Recreation and Public Purposes Act would be made in Zones 2 and 3 to provide appropriate facilities or services.	Same as Alternative B, except emphasis would also be given to exchanges of O&C and CBWR lands that would contribute to conservation of biological diversity.	Land exchanges would be made to benefit one or more of the resources managed. Exchanges involving disposal of timber to acquire lands containing greater nontimber values would be emphasized. Sales of lands other than available commercial forest lands would be made to dispose of lands that meet criteria (1) or (2) of FLPMA Section 203(a), but sales of land that meet only criterion (3) would not be made. No lands would be leased, except leases and conveyances under the Recreation and Public Purposes Act would be made in Zones 2 and 3 to provide facilities or services for the benefit of the public.	Same as Alternative D.

	All Common Alternatives	Alternative A
Issue No 10. (Continued).	under FLPMA Section 203(a) if important recreation, wildlife, watershed, threatened or endangered species habitat, and/or cultural values are not identified during disposal clearance reviews and no viable exchange proposals for them can be identified. The discussion of Zone 3 lands must state which of the disposal criteria in FLPMA, Section 203(a), apply. Zone 3 lands would also be available for transfer to another agency or to local governments, as needed to accommodate community expansion and other public purposes.	
Issue No. 11: Rural Interface Area Management Which BLM-administered lands should be allocated to receive special management practices due to the concerns of residents who live in close proximity? (Rural interface areas are areas where BLM-administered lands are adjacent to or intermingled with privately owned lands where county zoning has created or allows for creation of lots as small as 1 to 20 acres. In most rural interface areas concerns of the residents are related to forest management practices, visual quality and potential affects on domestic water sources and water supplies.)		No special management actions except those that address other issues.

Sensitivity Analyses

Sensitivity analysis is a process of examining specific trade-offs which would result from making changes in single sensitive elements of an alternative. Such analyses will be particularly helpful in developing the preferred alternative, to make it most effective in reconciling potential conflicts and optimizing overall benefits. The sensitivity analyses will have the further benefit of informing the public about certain trade-offs, which should facilitate their offering information preferences in their comments on the Draft RMP/EIS.

Sensitivity Analyses of Land Use Allocations

Some specific land-use allocations and other decision elements will be subjected to sensitivity analysis at the same time as preliminary analysis of impacts of the initial array of plan alternatives and prior to selection of a preferred alternative. This analysis will identify approximate opportunity costs associated with differing approaches to the most sensitive land use allocations and decision elements.

Because of the number of land use allocation issues and alternatives, sensitivity analysis must be tightly focused to be manageable. The analysis, therefore, will focus on mid-range alternatives. At a minimum, the following will be analyzed for Alternatives B, C and D and the preferred alternative:

- Effects on timber harvest (ASQ) and related jobs and county revenues, and on cavity dwellers, of substituting the next higher and next lower alternative levels of snag

Alternative B	Alternative C	Alternative D	Alternative E
On BLM-administered lands within one quarter mile of private lands in identified rural interface areas zoned for 1 to 5-acre lots, customary forest management practices would be altered, where realistically feasible, to mitigate the adjacent neighbors' concerns (i.e., management would look for alternative methods of practicing intensive forest management). Examples of management options include harvest regimes other than clearcutting, hand application rather than aerial application of herbicides and pesticides, inclusion of additional buffers for domestic water sources, and hand piling slash for burning as opposed to broadcast burning. All BLM-administered lands within a quarter mile of designated rural interface areas 1 to 5-acre lots) would be managed for VRM class III objectives.	Same as Alternative B except that lands zoned for 1 to 20-acre lots would also be included as the rural interface area.	On BLM-administered lands within one quarter mile of private lands in rural interface areas zoned for 1 to 20-acre lots, there would be no herbicide spraying, no clear cutting, and no prescribed burning. BLM-administered lands within this area would be managed for VRM class II objectives.	Same as Alternative D except BLM-administered lands within one half mile of private lands in rural interface areas would be managed as discussed in Alternative D. Areas zoned for lots larger than 20 acres, but with tax lots of 20 acres or less and/or existing legal multiple residences, may also be addressed in this alternative.

and wildlife tree protection, and of providing for no specific protection of cavity nesters on suitable forest or woodland.

- Effects on ASQ and related jobs and county revenues, and on other relevant values, of substituting the next higher and the next lower alternative levels of riparian zone protection, and of providing only legally required protection of riparian zones to preserve commercial trees on suitable forest or woodland.

- Effects on ASQ and related jobs and county revenues, and on spotted owl populations (number of pairs), of substituting the next higher and the next lower alternative levels of old growth and mature forest protection, and of providing no specific old growth and mature forest protection on suitable forest or woodland.

The following additional sensitivity analyses will also be made:

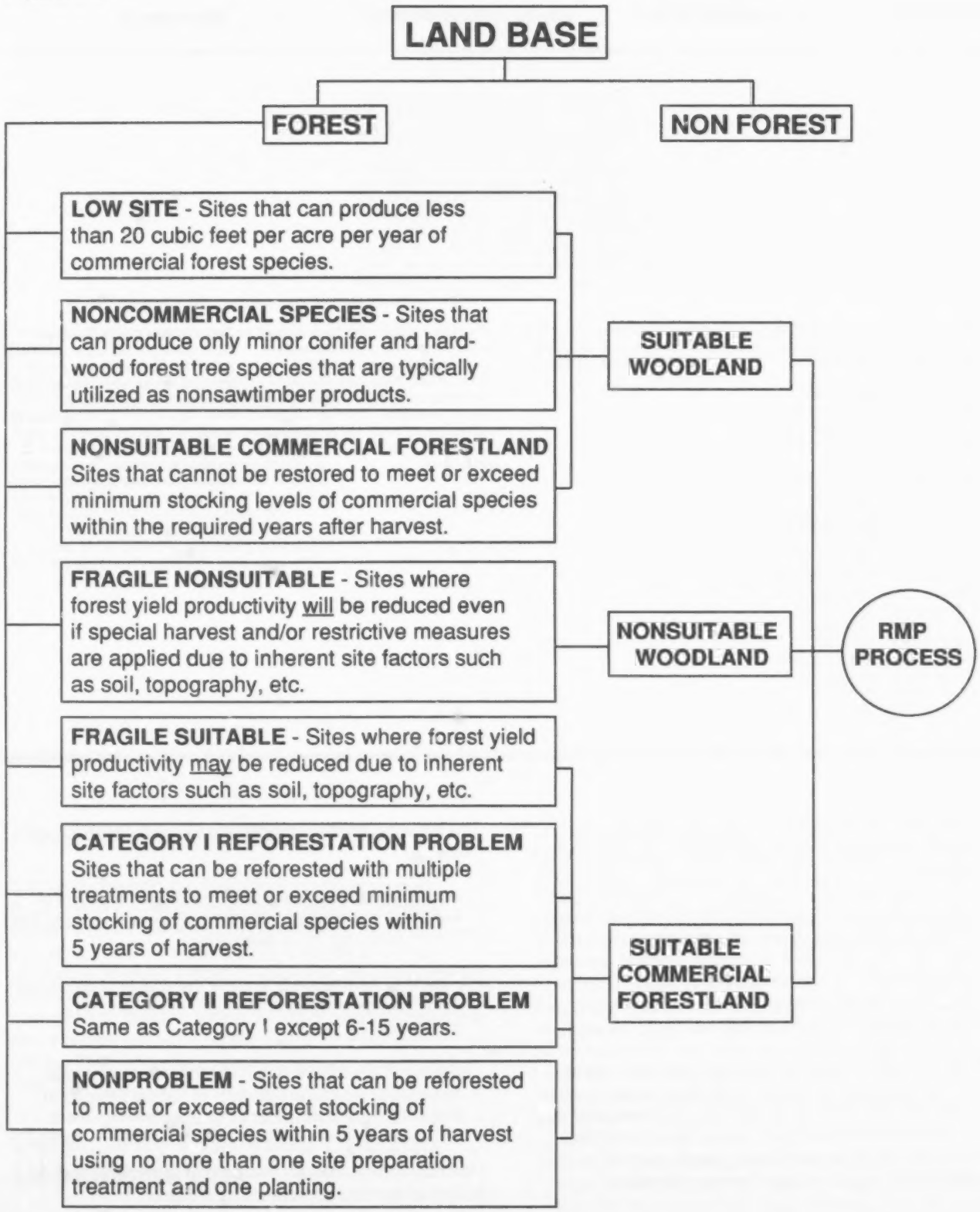
- Analysis of Alternatives C and D to show the effects of substituting extended rotation of old growth forest in lieu of no harvest for those alternatives.

- Analysis of Alternative B to show the effects of placing all lands allocated primarily to timber production on a rotation of 150 years.

- Analysis of Alternative B to show the effects of partial retention of structural elements of habitat diversity in timber harvest units under even-aged management.

Other sensitivity analysis elements or increments may be added as deemed appropriate by a district.

Figure 3-1


LAND BASE
FOREST
NON FOREST
LOW SITE - Sites that can produce less than 20 cubic feet per acre per year of commercial forest species.
NONCOMMERCIAL SPECIES - Sites that can produce only minor conifer and hard-wood forest tree species that are typically utilized as nonsawtimber products.
NONSUITABLE COMMERCIAL FORESTLAND Sites that cannot be restored to meet or exceed minimum stocking levels of commercial species within the required years after harvest.
SUITABLE WOODLAND
FRAGILE NONSUITABLE - Sites where forest yield productivity will be reduced even if special harvest and/or restrictive measures are applied due to inherent site factors such as soil, topography, etc.
NONSUITABLE WOODLAND
RMP PROCESS
FRAGILE SUITABLE - Sites where forest yield productivity may be reduced due to inherent site factors such as soil, topography, etc.
CATEGORY I REFORESTATION PROBLEM Sites that can be reforested with multiple treatments to meet or exceed minimum stocking of commercial species within 5 years of harvest.
CATEGORY II REFORESTATION PROBLEM Same as Category I except 6-15 years.
NONPROBLEM - Sites that can be reforested to meet or exceed target stocking of commercial species within 5 years of harvest using no more than one site preparation treatment and one planting.
SUITABLE COMMERCIAL FORESTLAND

Estimated effects on ASQ, together with resulting local employment and county revenues for each analysis, will be quantified and arrayed as in Table 3-2. Effects on other resource attributes will be quantified only where available analytical techniques are readily applicable. Otherwise, effects will be compared to relevant environmental consequence conclusions for the basic plan alternatives.

Sensitivity Analysis of Timber Management Prescriptions

For the preferred alternative, the following potential nondeclining timber harvest levels (even flow) or potential allowable sale quantities will be calculated and displayed. Attendant local employment and county revenues will be identified, along with the related long term sustained yield of timber, and any other relevant, identifiable effects.

1. The nondeclining harvest level under the conditions de-

Table 3-2 Sensitivity Analysis of Land Use Allocations (partial example using common alternatives)

Allocation or Decision Element	Base Alternative	Allocation or Element From Alternative	ASQ Change	Local Employment Change	County Revenue Change	Other Effect Changes
Snag and Wildlife Tree Protection	B,C	D No Protection				
	D	C E No Protection				
Riparian Zone Protection	B	A C				
	C	A B D				
	D	A C E				
Old Growth and Mature Forest Protection	B	C No Protection Partial Retention of Structure				
	C	B D No Protection Partial Retention of Structure Extended Rotation				
	D	C E No Protection Extended Rotation				
Timber Harvest Rotation Length	B	150 Year Minimum				

scribed in the first two paragraphs of Guidance for All Common Alternatives for Issue I.

2. The nondeclining harvest level if no stands younger than culmination of mean annual increment (CMAI) were planned for final harvest, and if all appropriate intensive management practices are applied. The number of years needed to reach CHAI would be determined separately for each selected site class, using appropriate growth and yield data simulation, such as the Stand Projection System Model or Organon. The site indexes to be used would be the same as those calculated from the extensive forest inventory and used in simulating growth and yield.

3. The nondeclining harvest levels if minimum average tree diameter of a stand to be harvested were constrained at 12 inches, at 16 inches, at 20 inches, and at 24 inches. The number of years needed to reach each size would be determined as in 2 above, based on growth and yield data.

4. The nondeclining harvest level if each of the following intensive management practices were not used (A separate calculation for each prospectively foregone practice):

- planting of genetically improved stock
- fertilization
- precommercial thinning
- commercial thinning
- brush and hardwood conversion

5. The nondeclining harvest level if only the base program (site preparation, planting including genetically improved stock, protecting seedlings, and plantation release) were funded; and fertilization, precommercial thinning, commercial thinning and stand conversion were foregone.

6. The nondeclining harvest level if prescribed burning were prohibited or abandoned for other reasons.

7. The nondeclining harvest level if all use of herbicides to aid timber production were prohibited, or abandoned for other reasons.

8. The nondeclining harvest level that would result if 5, 6 and 7 all occurred.

9. The nondeclining harvest level that would result if currently forested commercial forest lands that are expected to be economically infeasible to harvest were removed from the available forest land base. (To be displayed only in plans where the potential harvest level for a sustained yield unit would change by more than 1 MMBF.)

10. The nondeclining harvest level if intensive management practices considered economically marginal were not used.

11. The harvest level that would result if a departure of as much as 10 percent above the nondeclining harvest level shown in sensitivity analysis 2 were selected, provided that any increase does not exceed the long term sustained yield capacity. The harvest level in subsequent decades must not fall more than one percent below the nondeclining harvest level for sensitivity analysis 2. The potential departure would not exceed that needed to match recent timber supply levels in the market area, as defined by the Local Market Model being developed at the PNW Research Station, USFS. The period for which departure would be calculated would be the period of anticipated regional timber supply deficiency identified for the market area in recent studies.

These sensitivity analyses will assist BLM in identifying a proposed set of prescriptions for the preferred alternative. They will also identify the impacts of possible future adjustments in timber management prescriptions that may occur as a result of actions outside BLM's control.

Table 3-3. Sensitivity Analysis of Timber Management Prescriptions, Preferred Alternative

Sensitivity Analysis	ASQ	Local Employment	County Revenue	Other Effects
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				

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